



GILBERT

Categorical Exclusion
for a downtown

GILBERT PARK-and-RIDE

PROJECT: CM-900-0(208)

TRACS# 000 MA 999 H5466 OIX

Submitted to:

ADOT Environmental Planning Group

Prepared for:

The Town of Gilbert

and the

Maricopa Association of Governments

in support of the

MAG Regional Transportation Plan



Arizona Department of Transportation

Environmental Planning Group

205 South 17th Avenue Room 213E Mail Drop 619E Phoenix, Arizona 85007-3212
Phone 602.712.7760 FAX 602.712.3066

Mary E. Peters
Director

September 19, 2001

Mr. Robert E. Hollis
Division Administrator
Federal Highway Administration
234 North Central Ave. #330
Phoenix, AZ 85004

Attention: Steve Thomas

Re: Federal Aid No. CM-900-0(208)
TRACS No. 000 MA 999 H5466 01X
Gilbert Park and Ride

Dear Mr. Hollis:

In accordance with Chapter 1, Title 23 USC, 23 CFR Part 771.117(d), the enclosed Categorical Exclusion for the referenced project is submitted for your approval. The project features the proposed construction of a park-and-ride lot in the center of the Town of Gilbert, Maricopa County, Arizona.

Based upon environmental studies and early coordination, it has been determined that: 1) the proposed project will not create any significant impacts to the quality of human environment, and 2) the action is classified as a Categorical Exclusion, which is the appropriate environmental document for the proposed project.

The Arizona Department of Transportation Environmental Planning Group requests your approval of the Categorical Exclusion as concurrence in these determinations.

Sincerely,

Dee Bowling

for Richard M. Duarte
Manager

RMD:re

Enclosure

c: Bill Snarr, ADOT Local Government Section
Tami Ryall, Town of Gilbert

ARIZONA DEPARTMENT OF TRANSPORTATION
Intermodal Transportation Division
Environmental Planning Group
205 South 17th Avenue
Phoenix, Arizona 85007

Categorical Exclusion

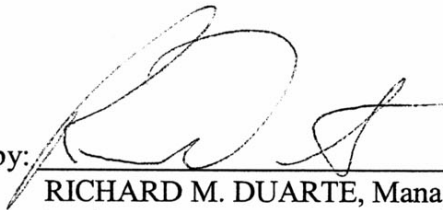
for

Gilbert Park and Ride

Maricopa County, Arizona

Federal Project No. CM-900-0(208)
Tracs No. 0000 MA 999 H5466 01X

Approved by:

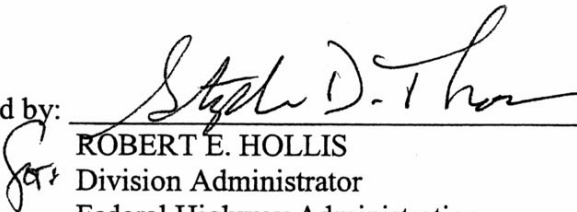


RICHARD M. DUARTE, Manager
Environmental Planning Group

Date:

9-19-01

Approved by:



ROBERT E. HOLLIS
Division Administrator
Federal Highway Administration

Date:

9/19/2001

This categorical exclusion has been prepared in accordance with provisions and requirements of Chapter 1, Title 23 USC, 23 CFR Part 771.117(d) relating to the implementation of the National Environmental Policy Act of 1969.



Arizona Department of Transportation

Environmental Planning Group

205 South 17th Avenue Room 213E Phoenix, Arizona 85007-3212
Phone 602.712.7760 FAX 602.712.3066

July 2, 2001

Mary E. Peters
Director

Ms. Tami Ryall
Government Relations Coordinator
Town of Gilbert
1025 South Gilbert, AZ 85296

JUL 18 REC'D

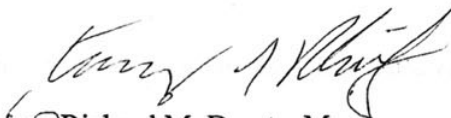
RE: Project: CM-900-0(208)
TRACS No.: 000 MA 999 H5466 01X
Gilbert Park and Ride

Dear Ms. Ryall:

The Environmental Planning Group has determined that the referenced project meets the criteria of a Group Two, Programmatic Categorical Exclusion in accordance with 23CFR771.117d, and the Arizona Programmatic Categorical Exclusion. A copy of the approved environmental document is enclosed. It is the responsibility of the Town of Gilbert to adhere to the mitigation measures listed in the environmental document.

This action concludes the environmental documentation process and constitutes federal environmental approval. The project may now be advanced through the development process under jurisdiction of the ADOT Local Government Section. If you have any questions regarding the environmental process, please contact Ralph Ellis at (602) 712-8353.

Sincerely,


Richard M. Duarte, Manager
Environmental Planning Group

Attachments
RMD:re

cc: B.S.B. Murthy, ADOT Local Government Section
Mark McLaren, S.R. Beard Associates
Project File



Arizona Department of Transportation

Environmental Planning Group

INTEROFFICE MEMO

To: PERRY POWELL, Phoenix Construction District
JIM HAMPSHIRE, TES Phoenix District
JOHN PEIN, Transportation Planning Division
B.S.B. MURTHY, Local Government Section'
SABRA MOUSAVI, R/W Proj Mgmt Section
HARI KHANNA, Program & Project Mgmt Section

Date: July 2, 2001

From: RICHARD M. DUARTE, Manager
Environmental Planning Group

Subject: Project: CM-900-0(208)
TRACS #: 000 MA 999 H5466 01X
Gilbert Park-and-Ride

This project has been reviewed by the environmental Planning Group, and it has been determined to meet the criteria of a Group Two, Programmatic Categorical Exclusion, in accordance with 23CFR771.117d, and the Arizona Programmatic Categorical Exclusion. This action constitutes environmental approval.

Please include the following mitigation measures(s) in the project specification:

City Responsibilities:

- Because the project is federally funded, the Town of Gilbert, in accordance with Federal Regulations 23CFR, Part 650, Subpart B, shall determine if design features to reduce erosion and minimize sedimentation during and after construction are required.
- In compliance with Executive Order 13112 regarding noxious weeds, where appropriate, disturbed soils shall be seeded using native species to help prevent the establishment of noxious weeds in the future. In addition, many of the disturbed areas will be landscaped with native trees and shrubs.
- The design of the Gilbert Park-and-Ride will be consistent with the character and scale of new development undertaken pursuant to the Heritage District Redevelopment Plan.
- Due to large amounts of automobile parts, equipment, miscellaneous items, and vehicles that cover the soil of the site and prevent observations of soil conditions, the level of contamination for the project site cannot be determined. After the site is cleared of these materials, a Phase II Environmental Site Assessment will be done. Should hazardous materials be encountered during construction, work will cease at that location and the Town of Gilbert will arrange for proper treatment or disposal of those materials.

Contractor Responsibilities:

- In compliance with Executive Order 13112 regarding noxious weeds, in order to prevent the introduction of noxious weeds, all earth moving and hauling equipment will be washed at the contractor's storage facility prior to entering the construction site.

- In compliance with Executive Order 13112 regarding noxious weeds, where appropriate, disturbed soils shall be seeded using native species to help the establishment of noxious weeds in the future. In addition, many of the disturbed areas will be landscaped with native trees and shrubs.
- Specific dust control measures will be taken to minimize ambient particulate matter (PM₁₀) as directed in Maricopa County Rules 310 and 310.01.

If there is a change in project limits or work is to be added outside of the original project limits, ADOT's Environmental Planning Group must be contacted to evaluate potential impacts.

RMD:rke

c: Steve Thomas, FHWA¹

¹ Receive Clearance Memo and Environmental Document

ARIZONA DEPARTMENT OF TRANSPORTATION

ENVIRONMENTAL PLANNING GROUP

Environmental Determination

Project Number: Federal Aid Number: CM-900-0 (208) **TRACS Number:** 000 MA 999 H5466 01X

Project Name: Gilbert Park-and-Ride

Route: N/A **Limits:** SW Corner of Page Ave / Ash St

I. PROJECT DESCRIPTION

The proposed Gilbert Park-and-Ride Lot is located in the center of the Town of Gilbert in Maricopa County, Arizona (**Figure 1**). The Town of Gilbert is located in the southeastern section of metropolitan Phoenix, 24 miles from the Phoenix central business district (**Figure 2**). The Town is approximately 50 square miles and is bounded by Mesa on the north and Chandler on the west. The downtown is located along Gilbert Road between Vaughn Avenue and the Union Pacific Railroad (UPRR) tracks. The Superstition Freeway (US 60) parallels the town's northern boundary and is the primary regional roadway access for Gilbert.

The Town of Gilbert is expecting to lose an existing park-and-ride lot in the center of town that is shared with a church, the owner of the property. The existing site, at the northwest corner of Gilbert Road and Vaughn Avenue, offers only 25 parking spaces. More suitable sites that can accommodate projected demand and serve as a multi-modal center for local/express buses and for future rail service have been considered as alternatives. The future park-and-ride lot would serve Valley Metro express bus riders who are commuting between Gilbert and downtown Phoenix as well as local north/south service on Gilbert Road.

Findings from the site analysis performed by S.R. Beard & Associates indicate the preferred location of the Gilbert Park-and-Ride Lot is the southwest corner of Page Avenue and Ash Street (**Figure 3**). The project site is bordered by Page and Vaughn Avenues to the north, Ash Street to the east, and UPRR tracks to the south and west. It is located within the downtown area of Gilbert and is approximately 3 acres in size (**Figure 4** illustrates the site plan). The location of the park-and-ride could benefit local businesses since commuters will be boarding and alighting just west of the commercial core. The park-and-ride could also provide opportunities for joint use, redevelopment, and improved lighting and streetscape design.

The irregular shaped project site consists of seven properties comprised of a warehouse, a vacant lot owned by the Town of Gilbert, two single-family residences, Vets Plumbing, All Start Electric, and LeMac Equipment. The warehouse, which is located at the southeast corner of the site, adjacent to the railroad tracks on the south and Ash Street on the east, is utilized by Norwood Furniture company for furniture and record storage. The vacant lot with a graded dirt surface owned by the Town of Gilbert is located at the southwest corner of the intersection of Ash Street and Page Avenue. The two single-family residences as well as Vets Plumbing and All Start Electric are found on Page Avenue between Oak Street and Ash Street. LeMac Equipment occupies the parcel on Oak Street north of Page Avenue.

Figure 1 – State Map

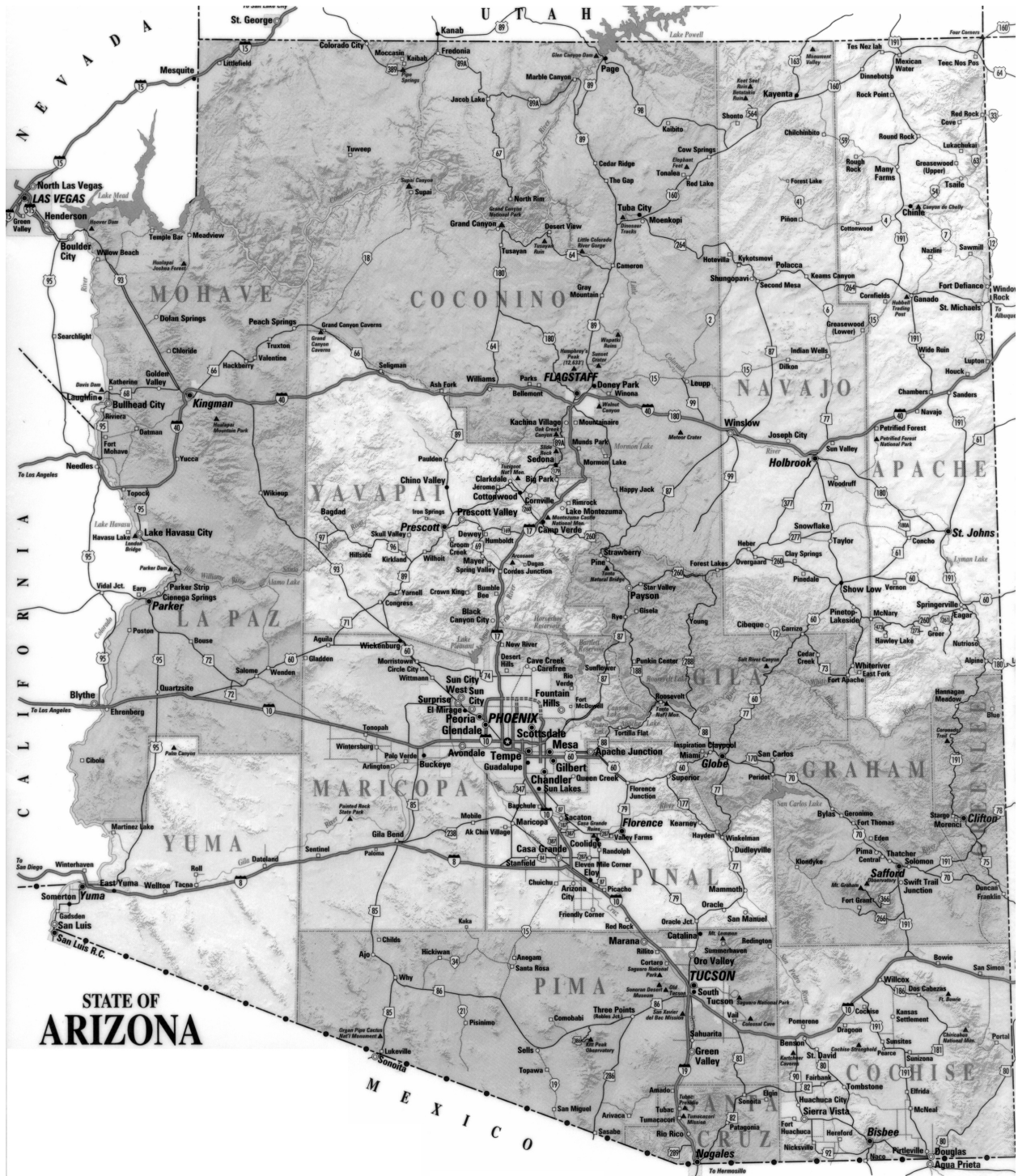


Figure 3 – Vicinity Map

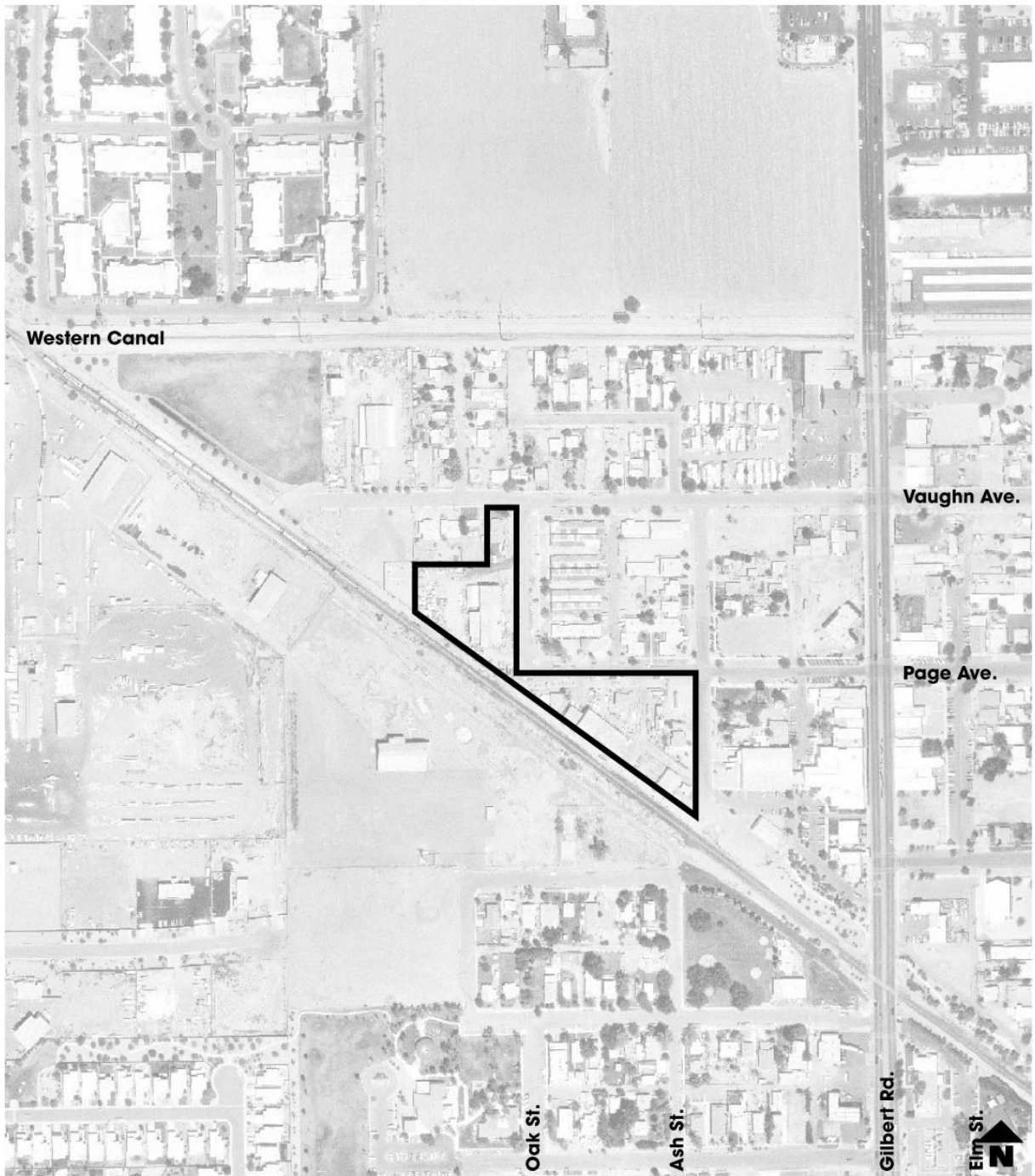
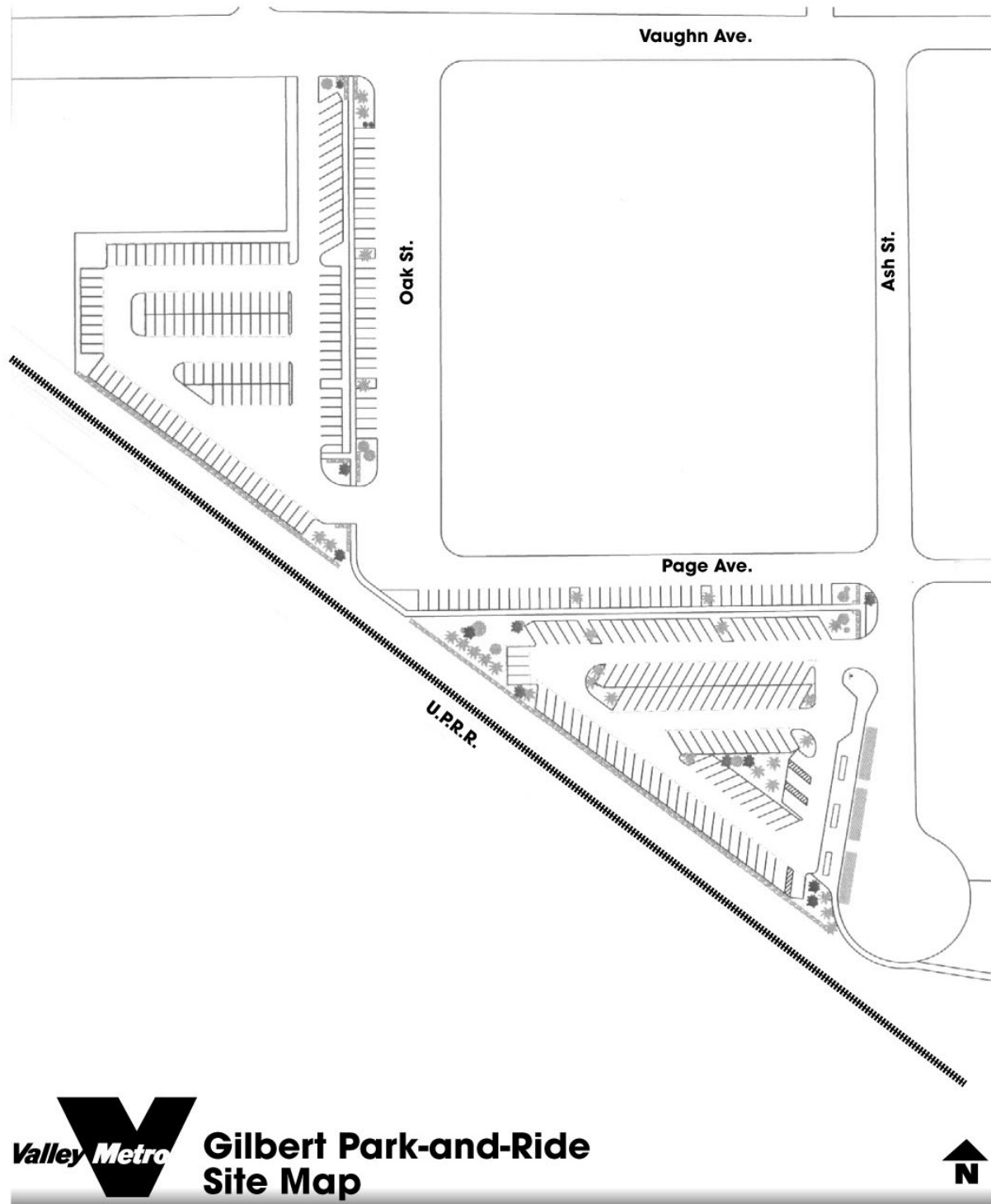


Figure 4 – Gilbert Park-and-Ride Site Plan



Adjacent properties to the north and south consist of residential properties and vacant land, some of which are separated from the site by Vaughn Avenue and Page Avenue and the Union Pacific railroad tracks. To the east but separated by Oak Street and Ash Street is the commercial core along Gilbert Road. Adjacent properties to the west consist mostly of vacant land.

The entire site will be cleared of debris and graded to accommodate the new facility. The Gilbert Park-and-Ride Lot will provide approximately 250 parking spaces, up to half which may be covered, and a drop-off area in close proximity to the bus bays. Passenger amenities will include shelters, benches, information kiosks, public telephones, and bicycle racks.

Cost estimates for the park-and-ride are as follows: \$610,000 for land acquisition, \$250,000 for design, and \$2.13 million for construction.

II. IMPACT EVALUATION

A. Natural Environment

1. Threatened and Endangered Species

The U.S. Fish and Wildlife Service's list of endangered, threatened, proposed, and candidate species for Maricopa County was reviewed by a qualified biologist (Dr. Robert A. Johnson; Johnson and Associates, EEI, Inc.). It was determined that no listed species or designated critical habitat will be affected by the construction of this project because none of these species have the potential to occur in or near the project area. Therefore, a biological survey within the project limits will not be necessary. The biological assessment is included as **Attachment A**.

2. Native Plants

According to the Arizona Department of Agriculture, there are no existing protected native plants within the project limits; therefore, there will be no impact to any protected native plants as a result of the project. A letter from the Arizona Department of Agriculture is included as **Attachment B**.

3. Noxious Weeds

Under Executive Order 13112, dated February 3, 1999, projects which occur on federal lands or are federally funded must: "subject to the availability of appropriations, and within Administration budgetary limits, use relevant programs and authorities to: i) prevent the introduction of invasive species; ii) detect and respond rapidly to, and control, populations of such species in a cost-effective and environmentally sound manner; iii) monitor invasive species populations accurately and reliably; and iv) provide for restoration of native species and habitat conditions in ecosystems that have been invaded."

In accordance with Executive Order 13112, the project area was surveyed by a qualified noxious weed authority, and it was determined that there are no listed noxious weeds within the project boundaries. Therefore, this project will not result in the spread of noxious weeds. In order to prevent the introduction of noxious weeds, all earth-moving and hauling equipment shall be washed at the contractor's storage facility prior to entering the construction site. Furthermore, all disturbed soils shall be seeded using native species to help prevent the establishment of noxious weeds in the future.

4. 100-Year Floodplain and Impacts

A review of the Federal Emergency Management Agency Flood Insurance Rate Map for the project area indicates that the project is not located within any 100-year floodplain; therefore, there will be no involvement with any 100-year floodplain as a result of the construction of this project.

5. Section 401/404

The proposed construction activities will not involve the discharge of dredged or fill material into waters of the United States; therefore, no Section 404 permit or Section 401 Water Quality Certification is required.

6. Section 4(f) Impacts

Section 4(f), of the U.S. Department of Transportation Act of 1966, states that the Federal Highway Administration (FHWA) “may approve a transportation program or project requiring publicly-owned land of a public park, recreation area, or wildlife and waterfowl refuge of national, state or local significance, or land of a historic site of national, state, or local significance (as determined by the federal, state, or local officials having jurisdiction over the park, area, refuge, or site) only if there is no prudent or feasible alternative to using that land and the program or project includes all possible planning to minimize harm to the park, recreation area, wildlife and waterfowl refuge, or historic site resulting from the use” (49 U.S.C. 303).

A “use” of a Section 4(f) resource, as defined in Title 23, Code of Federal Regulations (CFR), Part 771.135(p) occurs: (1) when land is permanently incorporated into a transportation facility; 2) when there is a temporary occupancy of land that is adverse in terms of the statute’s preservationist purposes; or 3) when there is a constructive use of land. A constructive use of a Section 4(f) resource occurs when the transportation project does not incorporate land from resources, but the project’s proximity impacts are so severe that the protected activities, features, or attributes that qualify a resource for protection under Section 4(f) are substantially impaired. For example, a constructive use can occur when:

- a) the projected noise level increase, attributable to the project, substantially interferes with the use and enjoyment of a noise-sensitive facility of a resource protected by Section 4(f);
- b) the proximity of the proposed project substantially impairs aesthetic features or attributes of a resource protected by Section 4(f), where such features or attributes are considered important contributing elements to the value of the resource. An example of such an effect would be the location of a proposed transportation facility in such proximity that it obstructs or eliminates the primary views of an architecturally significant historical building, or substantially detracts from the setting of a park or historic site which derives its value in substantial part due to its setting; and/or
- c) the project results in a restriction on access, which substantially diminishes the utility of a significant publicly-owned park, recreation area, or historic site.

Poco Verde Park, owned and maintained by the Town of Gilbert, is the only Section 4(f) resource near the project area and is located on the south side of the railroad tracks near the intersection of Park Avenue/Ash Street. The project will not require acquisition of land from the park. The project is expected to result in no impact per FTA's noise impact criteria. As discussed in the *Visual Impacts* section below, the project also will not adversely affect the visual setting of the park. In addition, access to the park will not be affected by the project. Therefore, the project will result in no Section 4(f) involvement.

7. Visual Impacts

The existing site area consists of vacant lots, multi-family housing, a railroad corridor, and commercial buildings that face Gilbert Road to the east. The design of the park-and-ride will be undertaken with the use of materials and colors, which are consistent with the scale and character of new construction in downtown Gilbert, and will provide a visual improvement to the area. New buildings in downtown Gilbert evoke the historic character of a western town.

8. Prime or Unique Farmlands

There is no farmland adjacent to the proposed Gilbert Park-and-Ride Lot project area; therefore, there will be no impact or involvement with any prime or unique farmland or other farmland of statewide or local importance.

9. Wild and Scenic Rivers

There are no wild or scenic rivers in the vicinity of the proposed project; therefore, there will be no impact to any wild or scenic rivers as a result of this project.

10. National Natural Landmarks

There are no National Natural Landmarks in the area; therefore, there will be no impact to any National Natural Landmarks as a result of this project.

B. Physical/Construction

1. Noise Impacts

While not required for environmental determination, an analysis of future traffic volumes in 2010 and 2020 at three surrounding intersections (Gilbert Road and Guadalupe Road, Gilbert Road and Page Avenue, and Gilbert Road and Elliot Road) was conducted by AZTEC Engineering to be used in the Noise and Air Quality components of this report. As shown below in **Table 1**, traffic volumes during the PM Peak Hour will increase substantially at each intersection by the year 2020. The report submitted by AZTEC Engineering is included as **Attachment C**.

The project does not involve additional through lanes, changes to the vertical or horizontal alignment, or new alignment. Therefore, according to ADOT's guidelines, a noise analysis would not normally be required. However, a noise analysis was conducted because a park-and-ride lot can potentially result in adverse noise impacts from buses idling as passengers board and alight and from buses passing by in noise-sensitive areas. The noise analysis showed that the project would result in no impact to nearby noise-sensitive uses. Refer to **Attachment D** (*Town of Gilbert Park-and-Ride Lot Noise Analysis Technical Memorandum*) for more details. Construction noise will be controlled in accordance with local rules and ordinances.

Table 1 – 2001, 2010, and 2020 Traffic Volumes

Year	Gilbert/Guadalupe	Gilbert/Page	Gilbert/Elliot
2001	5254	2515	4195
2010	6696	3195	5346
2020	8534	4057	6813

2. Air Quality Impacts

This project will result in additional vehicle activity on Page Avenue and Gilbert Road between Guadalupe Road and Elliot Road. As such, a project-level conformity analysis is required to demonstrate that any existing exceedances of the national ambient air quality standard (NAAQS) for carbon monoxide (CO) will not be aggravated, and that no new exceedances will be caused as a result of the project. Procedures for conducting such analyses are set forth in guidance provided by the U.S. Environmental Protection Agency (EPA, 1992). The air quality report that summarizes the results of this analysis was completed in consultation with Maricopa Association of Governments (MAG) and is included as **Attachment E**. A letter of concurrence from MAG for air quality conformity is included as **Attachment F**.

CO concentrations are highest near congested intersections. Due to the nature of this project, the three closest signalized intersections were selected for analysis. Computer simulation modeling was conducted using the MOBILE5a emission factor model (EPA, 1994) and the CAL3QHC version 2.0 roadway dispersion model (EPA, 1995). Traffic volumes, intersection geometry, roadway characteristics, and signal timing information were prepared by AZTEC Engineering and S.R. Beard Associates, LLC (see **Attachment C** again). Analyses were conducted for the intersections of North Gilbert at Guadalupe, Page, and Elliot for current conditions (nominally, December 2001), and for "build" and "no-build" scenarios for 2010 and 2020. The results of the analysis show that the CO NAAQS is not currently exceeded near any of the intersections, and that future year concentrations for both "build" and "no-build" scenarios are lower still.

The specific dust control measures that may apply when the construction phase of the project begins during the winter of 2002 are Maricopa County Rules 310 and 310.01. Although the proposed project is not expected to cause any violations of the PM₁₀ national ambient air quality standards, care will be taken to minimize ambient particulate matter (dust) levels. The following steps may minimize the amount of particulate matter generated, including incidental emissions caused by strong winds, as well as tracking dirt off the construction site by machinery and trucks.

1. Site Preparation
 - A. Minimize land disturbance, and
 - B. Use windbreaks to prevent any accidental dust pollution.
2. Site Restoration
 - A. Remove unused material, and
 - B. Remove dirt piles.

3. Construction-Related Impacts

Traffic control will be in accordance to Part VI, of the *Manual on Uniform Traffic Control Devices for Streets and Highways*, published by the U.S. Department of Transportation, Federal Highway Administration (1993), Traffic Control Supplement (1996), and/or associated provisions in the project plans, as determined by the ADOT Traffic Design Section during design.

4. Utility Impacts

No utility work is anticipated; however, the Town of Gilbert will investigate utility involvement during the project design phase.

5. Hazardous Materials Evaluation

A Phase I Environmental Site Assessment within the scope of ASTM Specification E 1527-00 was completed for the Gilbert Park-and-Ride in March 2001 by Environmental Site Assessments, Inc. (see **Attachment G**). Groundwater in the area of the project site has been impacted by releases from leaking underground fuel storage tanks from off-site sources. Therefore, groundwater at the project site may, or may not, have been impacted by these releases. This cannot be determined until a Phase II Environmental Site Assessment is completed (described further below).

For many years, portions of the project site have been actively used for vehicle repair and maintenance. Drums and tanks of waste oil and other petroleum products were observed stored at the site. Observations showed that the drums and containers were not equipped with secondary containment systems, barrier posts, protection from the elements, or stored on impervious surfaces.

Due to large amounts of vehicle parts, equipment, miscellaneous items, and vehicles which cover the soil of the site and prevent observations of soil conditions, the level of contamination cannot be determined. After the site is cleared of these materials, a Phase II Environmental site Assessment will be undertaken and a determination made as to whether they have been environmentally impacted. Should hazardous materials be encountered during construction, work will cease at that location and the Town of Gilbert will arrange for proper treatment or disposal of those materials.

6. National Pollutant Discharge Elimination System (NPDES)

Because the project has less than 5 acres of disturbance and the local government has a population of more than 100,000, and because the project is federally funded, the Town of Gilbert, in accordance with Federal Regulations 23CFR, Part 650, Subpart B, shall determine if design features to reduce erosion and minimize sedimentation during and after construction are required.

C. Socioeconomic

1. Residential/Commercial Development

The proposed Gilbert Park-and-Ride Lot is located within the downtown Gilbert just west of the commercial core. The Town of Gilbert is in the process of assembling parcels east and west of

Gilbert Road for medium-to-large scale redevelopment projects. This area currently has commercial uses on Gilbert Road with vacant, residential, and industrial uses located west of Gilbert Road near the site of the proposed park-and-ride. The project is consistent with the intent of the Town Redevelopment Plan.

2. Minority Group(s)

Based on 2000 Census data obtained from the Town of Gilbert and Maricopa Association of Governments, an analysis of demographics for the project area was compared with those of Gilbert and Maricopa County. The proposed park-and-ride lies within Census Tract 4224.01, Block Group 2. This Group is generally bounded by Guadalupe Road to the north, Gilbert Road to the east, Elliott Road to the south, and Cooper Road to the west.

The project area has a higher than average concentration of persons of any race who are Hispanic or Latino. The large proportion of residents of Hispanic or Latino origin is related to the presence of a mobile home park and multifamily housing within the block group which are primarily occupied by minority residents. Few single family residences exist in the immediate vicinity of the project. This is due in part to the fact that the Town of Gilbert has acquired many of the single family residences in the commercial district of downtown Gilbert for redevelopment purposes.

Although an identifiable minority group (any race of Hispanic or Latino origin) is present in the vicinity and one of the residences to be acquired is minority owned, the project will not have a disproportionate impact on that group because the project will not affect the mobile home park and multifamily housing in the area.

The Town of Gilbert has met with all of the property owners to discuss the planned acquisitions and relocations and have informed all of the process and each landowners' rights and types of compensation that they will receive (see letter from Town of Gilbert's Assistant Manager dated March 21, 2001 that is included as **Attachment H**).

3. Residential/Commercial Displacement(s)

Four businesses (Norwood Furniture Company warehouse, Vets Plumbing, All-Start Electric and Lemac Equipment) and two single-family residences will be displaced as a result of the project. The Town of Gilbert will follow the provisions of the Uniform Relocation Act and the 1987 Amendments as implemented by the Uniform Relocation Assistance and Real Property Acquisition Regulations for Federal and Federally Assisted Programs adopted by the Department of Transportation, dated March 2, 1989.

4. Temporary and Permanent Access

The project will not result in any permanent impacts on access, parking, or traffic service or patterns. Short-term impacts may occur during construction; however, access to all land uses will be maintained throughout the construction period.

5. Neighborhood Continuity

The proposed action would not disturb neighborhood continuity or community cohesion because the parcel is located adjacent to the commercial core within an area of vacant, residential, and industrial uses.

6. Public Awareness

The Town of Gilbert has actively informed its downtown business community and Gilbert residents about this project. The park-and-ride has received support from the Chamber of Commerce as well as the general public. A few issues which will require consideration during the design process are included below:

- The need to provide covered parking for a portion of the facility to provide a greater incentive for use during the summer months;
- The need to provide a design, which is consistent with the character and scale of new development undertaken pursuant to the Heritage District Redevelopment plan;
- The need to ensure that pedestrians cannot pass through the parking lot to cross the railroad tracks; and
- The need to ensure that the design of the facility does not preclude the ability to implement a future commuter rail station adjacent to the site in the future.

7. Environmental Justice

“Title VI, of the Civil Rights Act of 1964” and related statutes assure that individuals are not excluded from participation in, denied the benefit of, or subjected to discrimination under any program or activity receiving federal financial assistance on the basis of Race, Color, National Origin, Age, Sex, and Disability. Executive Order 12898 on Environmental Justice directs that programs, policies, and activities not have a disproportionately high and adverse human health and environmental effect on minority and low-income populations. The proposed project is a transit improvement project and will not result in significant impacts on the surrounding area. Two residences and four businesses will be required from private parties. One of the residences is minority-owned. The residents will be justly compensated and relocated as discussed in the *Residential/Commercial Displacement(s)* section. Therefore, the project is not anticipated to have any disproportionately high and adverse effects on these populations. Benefits of this project for all persons utilizing the improved facility are improved access to transit service and greater mobility.

D. Cultural Resources

1. Survey Data

The proposed project area was surveyed for cultural resources on March 9, 2001 by Carolyn J. Jackman of Archaeological Consulting Services, Ltd. (see **Attachment I**). The bladed area (about 0.5 acres) was systematically examined via parallel pedestrian transects spaced 5 meters apart. The ground surface was closely examined for isolated artifacts, artifact scatters, trash dumps, rock alignments, ash, stained soil, or other indications of cultural activity. In addition to the field inspection, aerial photographs and historic maps at the Gilbert Historical Society were inspected.

2. Archaeological/Historical Sites

Based on the results of the survey and archival research, no archaeological or historic sites were identified. No historic buildings or other potential features were found in the project area, nor did the Gilbert Historical Society remember any historic use in the area.

3. Agency/SHPO Determination

The State Historic Preservation Office (SHPO) has issued its concurrence for the Gilbert Park-and-Ride by agreeing to the following findings: the definition of the area of potential effect (APE), identification of consulting parties, adequacy of the survey, and “no historic Properties affected”. A copy of the SHPO concurrence letter can be found as **Attachment J**.

4. Mitigation

No cultural resources mitigation is warranted for the proposed project. If previously unidentified cultural resources are encountered during activity related to the construction of the project, the contractor shall stop work immediately at that location and shall take all reasonable steps to secure the preservation of those resources. The Town of Gilbert will immediately make arrangements for the proper treatment of those resources.

III. PUBLIC INVOLVEMENT

A. Public Meetings

The proposed Gilbert Park-and-Ride was discussed during several public meetings held in the Town of Gilbert. Meetings were conducted by Town of Gilbert, Regional Public Transportation Authority, and S.R. Beard & Associates staff. These meetings included:

- Gilbert Transit Open House, June 8, 2000
- Gilbert Transit Open House, July 20, 2000
- Gilbert Transit Open House, September 23, 2000
- Gilbert Redevelopment Commission Meeting, December 14, 2000
- Citizen’s Transportation Oversight Committee, November 16, 2000
- Gilbert Bicycle Committee, October 25, 2000

In addition, the park-and-ride was discussed with the members of the Gilbert Chamber of Commerce on July 13, 2000. Issues raised regarding the planning and design of the park-and-ride are summarized in Public Awareness under Section 2.


B. Coordination

Coordination has been undertaken with federal/state and local resource agencies. Agencies contacted have included:

- Town of Gilbert - Environmental Programs, Planning Department, Neighborhood Services, Engineering Department, and Town Manager’s Office
- Arizona Department of Environmental Quality
- Arizona State Game & Fish Department
- Arizona Department of Environmental Quality
- Maricopa County Flood Control District
- Arizona Department of Agriculture
- Arizona Department of Environmental Quality
- U.S. Bureau of Reclamation - Environmental Division
- U.S. Environmental Protection Agency - Office of Federal Activities

VI. CLEARANCE

Prepared By:


Mark McLaren
S.R. Beard & Associates

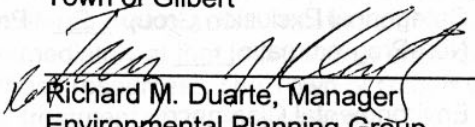
Date: 6.18.01

Reviewed By:


Tami Ryall, Government Relations Coordinator
Town of Gilbert

Date: 6/18/01

Reviewed/Approved By:


Richard M. Duarte, Manager
Environmental Planning Group

Date: 7/3/01

VII. ATTACHMENTS

- A. Biological Assessment for Development of a Park-and-Ride Facility in Gilbert, Arizona; Johnson and Associates, EEI, Inc.
- B. Letter from Arizona Department of Agriculture
- C. Gilbert Park-and-Ride Lot Data Collection Report; AZTEC Engineering
- D. Town of Gilbert Park-and-Ride Lot Noise Analysis Technical Memorandum; S.R. Beard & Associates, LLC.
- E. Air Quality Impact Analysis for the Proposed Gilbert Park-and-Ride Lot; Air Quality Management Consulting
- F. Letter of concurrence for Air Quality Conformity from Maricopa Association of Governments
- G. Phase I Environmental Assessment, Environmental Site Assessments, Inc.
- H. Letter from Town of Gilbert Assistant Manager regarding residential/commercial displacements
- I. A Cultural Resources Survey of the Proposed Gilbert Park-and-Ride Lot
- J. Letter of concurrence from State Historic Preservation Office
- K. Letter from Arizona Department of Environmental Quality
- L. Letter of support from Town of Gilbert Planning Department

Attachment A

**Biological Assessment for Development of a Park-and-Ride
Facility in Gilbert, Arizona; Johnson and Associates, EEI, Inc.**

BIOLOGICAL ASSESSMENT FOR DEVELOPMENT
OF A PARK-AND-RIDE FACILITY IN GILBERT, ARIZONA

Submitted by:

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Submitted to:

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15 March, 2001

INTRODUCTION

The Arizona Department of Transportation is developing a Park-and-Ride site in Gilbert, Arizona, on land owned by the City of Gilbert. The proposed site encompasses about three acres of property that contains several buildings. The initial phase of this project involves completing environmental documentation of the site. This document discusses biological resources that occur at the proposed location for the Gilbert Park and Ride facility in Gilbert, Arizona, including threatened and endangered species, critical habitat, and sensitive or unusual biotic communities such as riparian areas, wetlands, and springs. Two additional biological issues are also addressed: (1) presence of noxious weeds and (2) presence of native plants that are protected by state law.

METHODS

Threatened and endangered plant and animal species that may occur within the project area were identified through a search of the U.S. Fish and Wildlife Service county data base (<http://ifw2es.fws.gov/EndangeredSpecies/Lists/ListSpecies.cfm>) and an on-site field survey. The field survey was conducted in early March 2001 and involved searching for rare and sensitive biological resources, noxious plants, and protected native plant species. Habitat types were characterized and plant species in the project area were identified. Noxious plant species were determined based on the list developed by the Arizona Department of Agriculture (<http://agriculture.state.az.us/PSD/quarantine2.htm>), and protected native plants were determined by consulting the Arizona Department of Agriculture protected plant list (<http://agriculture.state.az.us/PSD/protplantlist.htm>).

DESCRIPTION OF PROJECT AREA

The project area encompasses two adjoining irregularly-shaped parcels in Gilbert, Arizona, that total about three acres in size (Figures 1-4). One parcel is triangular in shape while the parcel to the west resembles a trapezoid with a small additional section jutting to the north. The parcels are located about two blocks west of Gilbert Road between Elliot and Guadalupe Roads; both parcels occur along the north side of the Southern Pacific railroad tracks (Figures 2-4).

Both parcels are developed, and several buildings occur on the site. Vegetation at the site is predominated by annual plant species, most of which are characteristic of disturbed or developed habitats. The most common annual plant species include Russian thistle (*Salsola iberica*), little mallow (*Malva parviflora*), London rocket (*Sisymbrium irio*), common barley (*Hordeum vulgare*), and wild oat (*Avena fatua*). Several individuals of desert broom (*Baccharis sarathroides*) also occur on the site; desert broom is a perennial plant species that is also indicative of disturbed habitats.

DESCRIPTION OF PROPOSED PROJECT

The proposed project will develop a parking facility to encourage the use of mass transit. Consequently, the existing buildings will be removed, followed by construction of a parking lot.

IDENTIFICATION OF BIOLOGICAL RESOURCES

Threatened and endangered species. A search of the U.S. Fish and Wildlife Service county data base (<http://ifw2es.fws.gov/EndangeredSpecies/Lists/ListSpecies.cfm>) indicates that 11 threatened or endangered species occur in Maricopa County. However, none of these species have potential to occur in or near the project area. These 11 species are listed in Table 1, along with the reason for excluding each species from the project site evaluation.

Table 1. Threatened and endangered species that occur in Maricopa County, but were not evaluated

relative to the proposed project in Gilbert, Arizona. The species list was obtained from the U. S. Fish and Wildlife Service data base for Maricopa County (<http://ifw2es.fws.gov/EndangeredSpecies/Lists/ListSpecies.cfm>).

Common Name	Scientific Name	Reason for Omitting from Evaluation
Arizona agave	<i>Agave arizonica</i>	Outside of elevational range, and chaparral to oak woodland habitats are absent from the area
Arizona cliffrose	<i>Purshia subintegra</i>	Outside of elevational range, and limestone soils are absent from the area
Arizona hedgehog cactus	<i>Echinocereus triglochidiatus arizonicus</i>	Outside of elevational range, and chaparral to oak woodland habitats are absent from the area
Desert pupfish	<i>Cyprinodon macularius</i>	No live water in or adjacent to project area
Gila topminnow	<i>Poeciliopsis occidentalis occidentalis</i>	No live water in or adjacent to project area
Razorback sucker	<i>Xyrauchen texanus</i>	No live water in or adjacent to project area
Lesser long-nosed bat	<i>Leptonycteris curasoae yerbabuenae</i>	Absence of food plants (saguaro and agave) in the project area
Mexican spotted owl	<i>Strix lucida occidentalis</i>	Outside of elevational range, and coniferous vegetation is lacking from the project area
Sonoran pronghorn antelope	<i>Antilocapra americana sonoriensis</i>	Not present near urban areas
Southwestern willow flycatcher	<i>Empidonax traillii extimus</i>	No live water in or adjacent to project area, and absence of potential habitat
Yuma clapper rail	<i>Rallus longirostris yumanensis</i>	No live water in or adjacent to project area, and absence of potential habitat

Noxious weeds. Most of the annual plant species at the Gilbert Park and Ride site are non-native. However, no noxious weed species were observed at the site.

Native plants. The few perennial plant species that occur on the site include desert broom and one individual of a hybrid palo verde (*Cercidium* sp. hybrid). Neither of these species is protected by State of Arizona native plant laws.

POTENTIAL IMPACTS

The proposed site for the Gilbert Park-and-Ride consists of highly disturbed habitat. No individuals of threatened or endangered species occur on or near the site and potential habitat for such species is absent from the area. Additionally, no protected native plant species are present on the site. Moreover, no biological impacts will occur by developing this site into a Park-and-Ride facility.

MEASURES TO MITIGATE IMPACTS

No measures are needed to mitigate impacts to biological resources at the proposed Park-and-Ride facility.

RECOMMENDATIONS AND CONCLUSIONS

The proposed site for the Park-and-Ride facility in Gilbert, Arizona, is highly developed and lacks sensitive biological resources including threatened and endangered species and protected native plants. Additionally, no noxious plant species were observed at the site. Moreover, there are no biological issues related to developing this site into a Park-and-Ride facility.

LITERATURE CITED

Arizona Department of Agriculture. 2001. State of Arizona list of protected native plant species.
(<http://agriculture.state.az.us/PSD/protplantlist.htm>).

Arizona Department of Agriculture. 2001. State of Arizona list of noxious weed species.
(<http://agriculture.state.az.us/PSD/quarantine2.htm>)

U.S. Fish and Wildlife Service. List of threatened and endangered species in Maricopa County, Arizona. (<http://ifw2es.fws.gov/EndangeredSpecies/Lists/ListSpecies.cfm>)

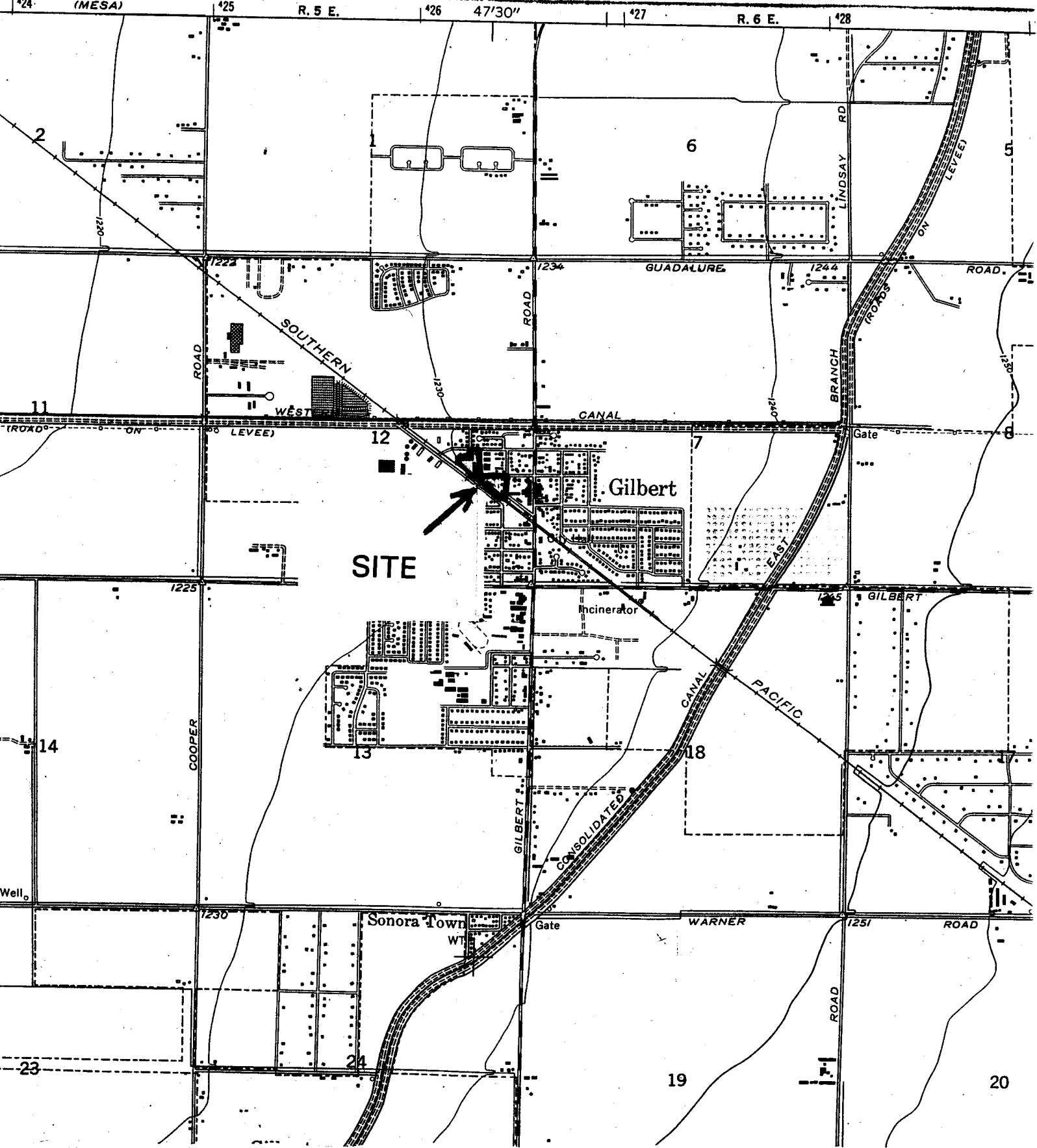


Figure 2. Topographic map showing approximate boundaries of the Park-and-Ride facility in Gilbert, Arizona, on the Chandler, Arizona, 7.5' Quad. Approximate project boundaries are delineated by a heavy black line.



Valley Metro **Gilbert Park-and-Ride
Preferred Site Location**

Figure 3. Aerial photograph of the proposed Park-and-Ride facility in Gilbert, Arizona. Approximate property boundaries are delineated by a black line.

Attachment B

Letter from Arizona Department of Agriculture

Arizona Department of Agriculture

1688 West Adams, Phoenix, Arizona 85007
602.364.0907 FAX 602.542.4494

ENVIRONMENTAL SERVICES DIVISION OFFICE OF REVIEW AND INVESTIGATION

January 8, 2001

Mr. Mark McLaren, ASLA
Regional Public Transportation
Bus Facilities Consultant
302 N. First Ave. Suite 700
Phoenix, AZ 85003

Re: Town of Gilbert Park-and-Ride
Federal Aid Number: CM-900-0 (208)
TRACS Number: H5466 01X

Dear Mr. McLaren:

The Arizona Department of Agriculture has reviewed the referenced letter dated January 4, 2001.

Based on the information provided, the project is not expected to have any impact on protected native plants.

We appreciate the opportunity to review the proposed action. If you need additional information, please contact me at 602/364-0907, or e-mail at jim.mcginis.agric.state.az.us.

Sincerely,

James McGinnis, ASPS, CPO
Native Plant & Cultural Resource Protection

Attachment C

Gilbert Park-and-Ride Lot Data Collection Report; AZTEC Engineering

Appendices A through F in the Gilbert Park-and-Ride Lot Data Collection Report (Attachment C) can be obtained by contacting the Town of Gilbert at (480) 503-6000.

Gilbert Park and Ride Lot Data Collection Report

Prepared for:

RPTA

411 N. Central Avenue

Suite 200

Phoenix, Arizona 85004

Prepared by:



AZTEC ENGINEERING

3747 E. Grove Street
Phoenix, Arizona 85040
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[602] 454-0403 FAX

June 2001

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I. INTRODUCTION

AZTEC Engineering was asked to obtain existing and predict future (2010 and 2020) traffic volumes in the vicinity of the proposed Gilbert Park and Ride lot to be used in an Air Quality Analysis. The proposed location of the lot is situated at Page Avenue west of Gilbert Road. Page Avenue is located between Guadalupe and Elliot Roads. The general location of the project is shown in **Figure 1**.

Three potential hotspot locations were identified along Gilbert Road for analysis purposes: the Elliot Road, Page Avenue, and Guadalupe Road intersections. These three intersections are signalized.

II. METHODOLOGY

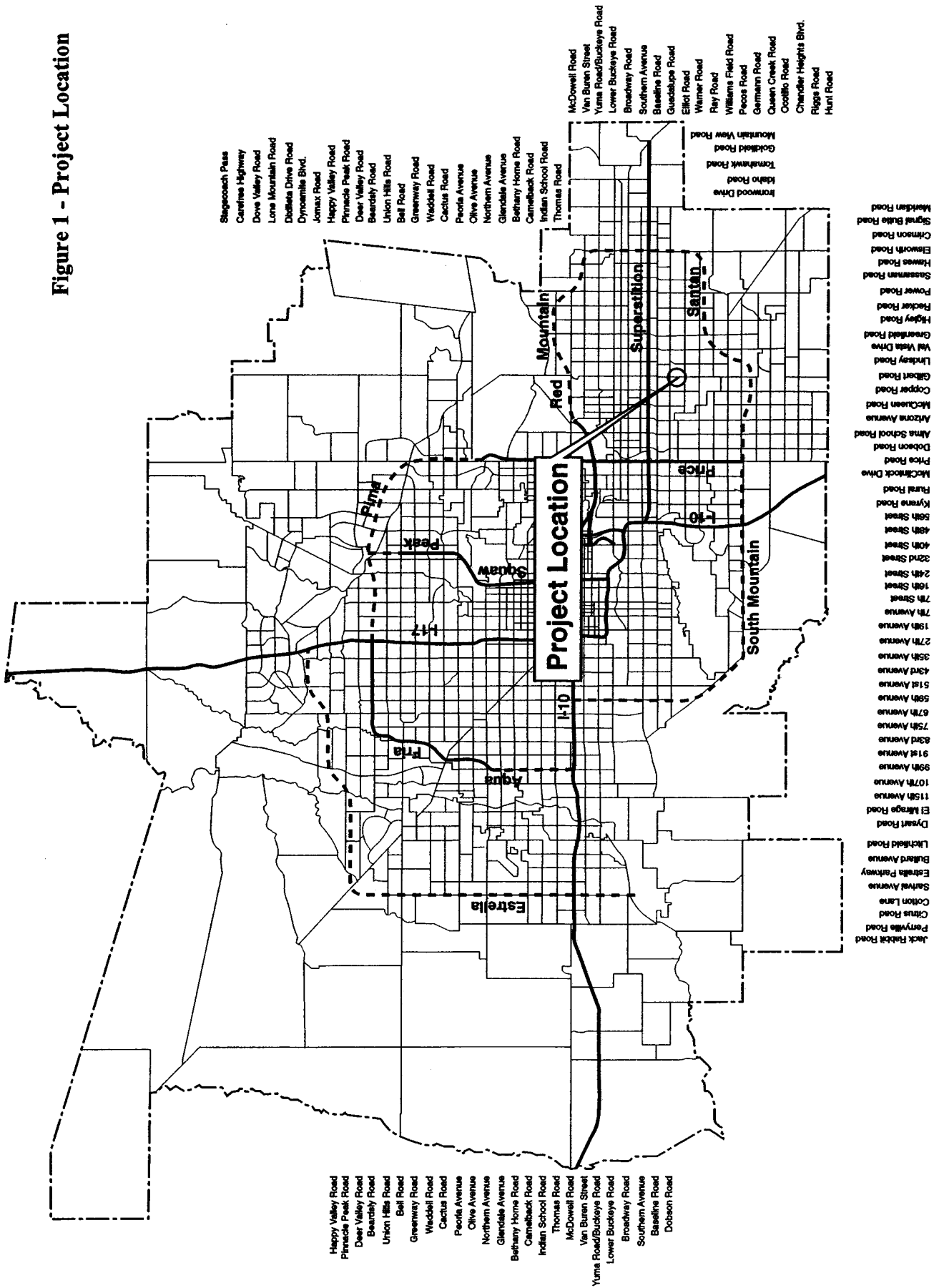
In order to predict future traffic volumes at the three analyzed intersections, the following tasks were undertaken:

1. A field reconnaissance of the site was conducted to evaluate the existing physical and operational characteristics of the analyzed intersections.
2. Per AZTEC Engineering's request Traffic Research & Analysis Inc. (TRA) collected existing traffic volumes at the three intersections on February 20, 2001. This data was used to determine the 2001 AM and PM traffic volumes.
3. Signal timing information and signal as-builts were obtained from the Town of Gilbert Engineering department.
4. 2000, 2010 and 2020 forecast traffic volumes were obtained from Maricopa Association of Governments (MAG) for the AM and PM peak hour, and 24-hour traffic volumes.
5. MAG forecast data was evaluated, growth factors were calculated using a spreadsheet obtained from MAG, and the 2010 and 2020 peak hour volumes were estimated using Microsoft Excel spreadsheets.

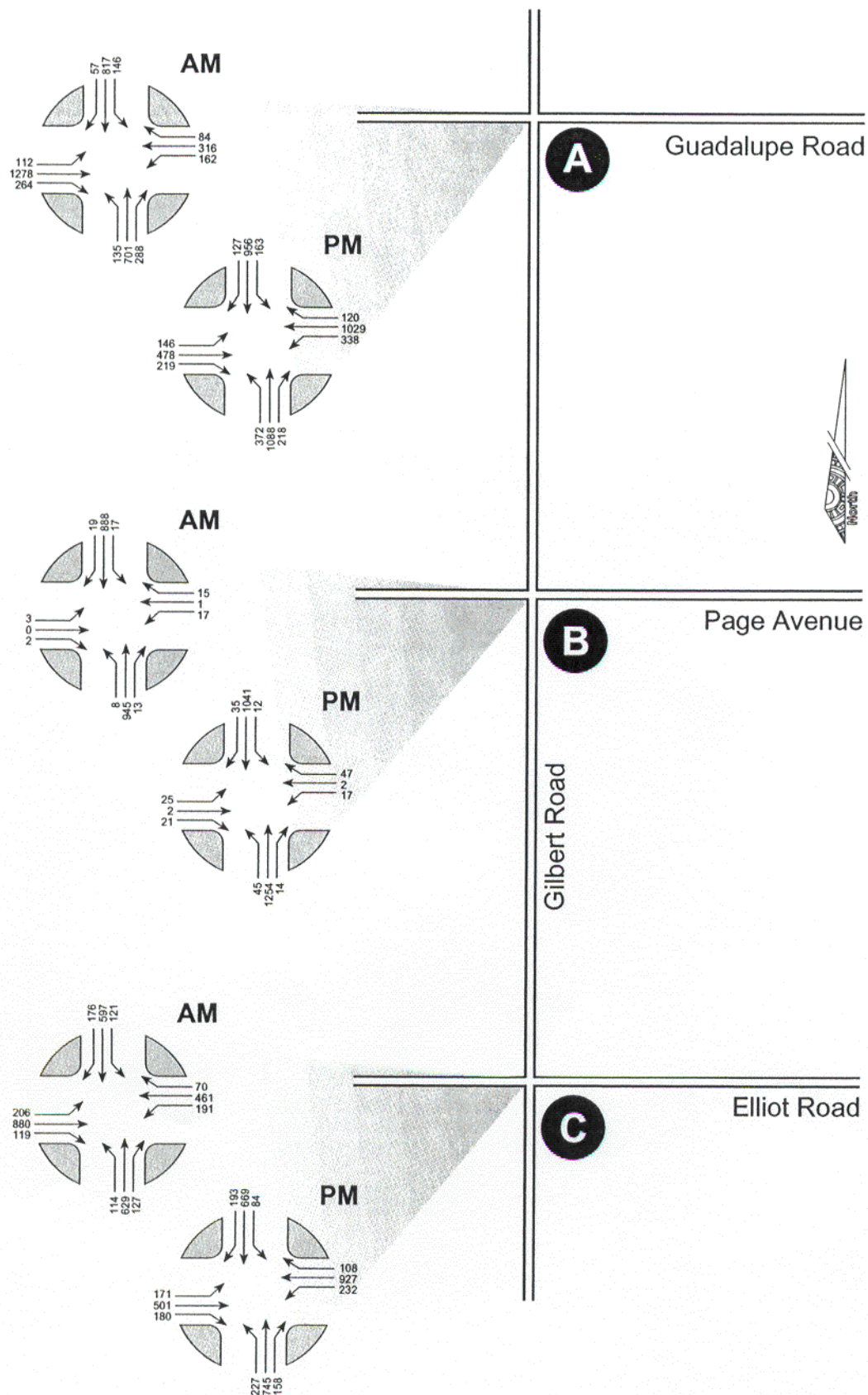
III. FUTURE TRAFFIC VOLUMES CALCULATIONS

In order to predict the future traffic volumes at the intersections of Gilbert Road with Elliot Road, Page Avenue, and Guadalupe Road, the recorded 2001 volumes were evaluated and the AM and PM peak hour volumes were determined. **Figure 2** shows the existing peak hour volumes for the three study intersections. Based on the existing approach turning volumes the turning percentages were calculated to be used in estimating the future traffic turning volumes. The MAG model provided 2010 and 2020

Figure 1 - Project Location



Gilbert Road Park and Ride Lot



Gilbert Road Park and Ride Lot

Figure 2
2001 AM/PM Peak Hour
Traffic Volumes

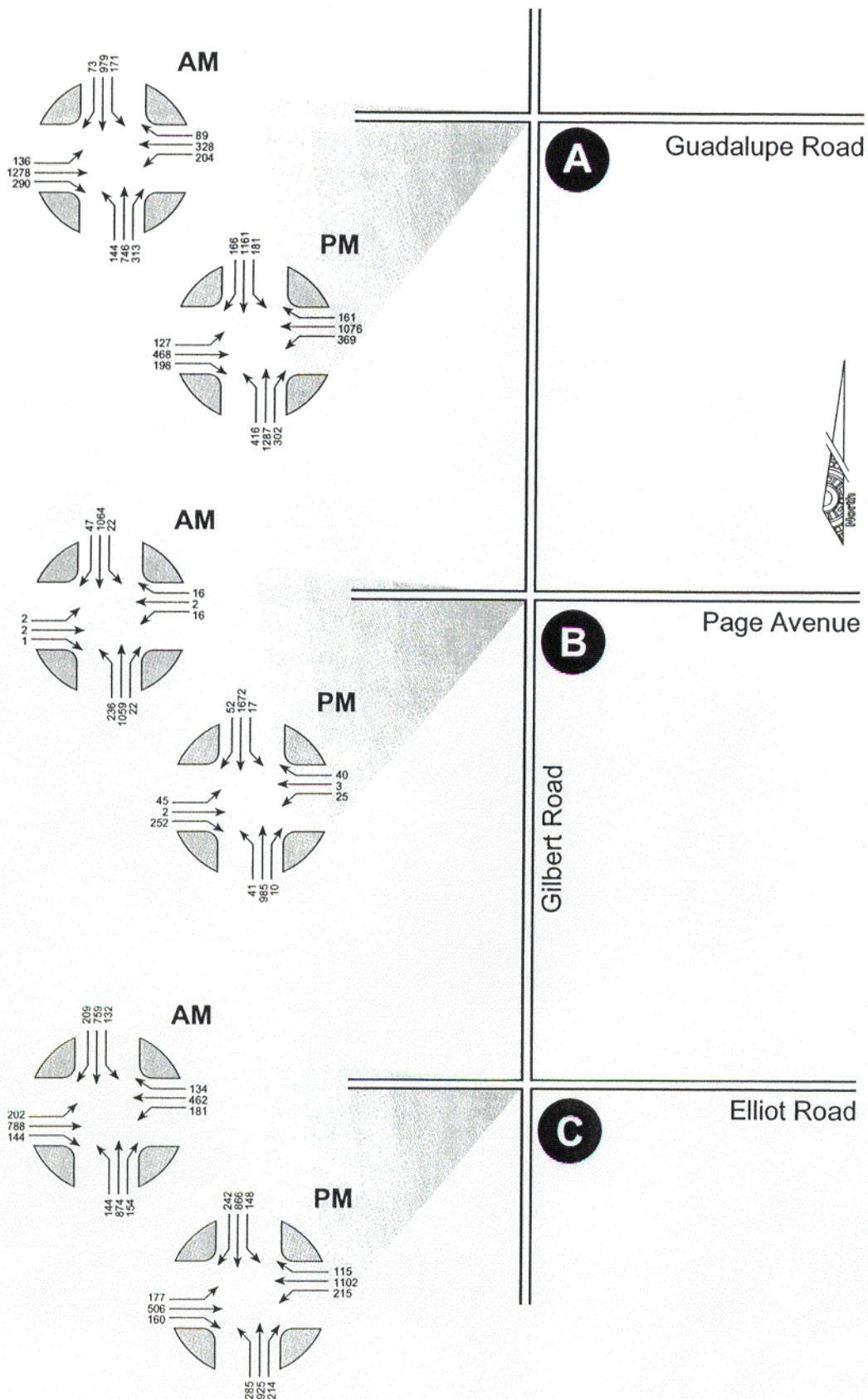
peak hour traffic volumes for the Gilbert Road/Elliot Road and Gilbert Road/Guadalupe Road intersections. The 2000 model was also obtained from MAG and then compared with the recorded 2001 traffic volumes. The 2001 recorded traffic volumes were either higher or lower than the MAG 2000 volumes. These differences were significant for several approaches, especially for eastbound and westbound traffic. Furthermore, the MAG future traffic volumes for the years 2010 and 2020 also showed some increases as well as some decreases from the recorded 2001 traffic volumes.

In order to accurately estimate the percent increase in traffic volumes at the study intersections, the differences in traffic volumes between MAG 2000 and 2010 volumes and also 2010 and 2020 volumes were calculated to obtain the 2010 and 2020 growth factors, respectively. The spreadsheet for determining the growth factor was obtained from MAG. It uses adjustment formulas to compute the forecast volumes (see Appendix A), which are then converted into the growth percentages. The growth factors were calculated for both peak hours for the horizon years of 2010 and 2020 for each approach to the three analyzed intersections except for the eastbound and westbound traffic on Page Avenue. The Page Avenue traffic volumes were not included as a part of the MAG model. In order to obtain the growth factors for the Page Avenue traffic, the averages of the four growth factors for the eastbound and westbound traffic on the Gilbert/Guadalupe and Gilbert/Elliot intersections were used.

The 2010 growth factors were then applied to the actual 2001 counts to obtain the forecast 2010 traffic volumes, while the 2020 growth factors were applied to the forecasted 2010 volumes to obtain 2020 forecast volumes. The resulting peak hour traffic volumes are presented in the Appendix C. The site traffic volumes generated for the 250-vehicle Gilbert Park and Ride site are shown in the Appendix D. These site volumes were added to the background forecast volumes. **Figure 3** shows the combined (built scenario) 2010 peak hour volumes for the three analyzed intersections. The 2020 peak hour traffic volumes are shown on **Figure 4**.

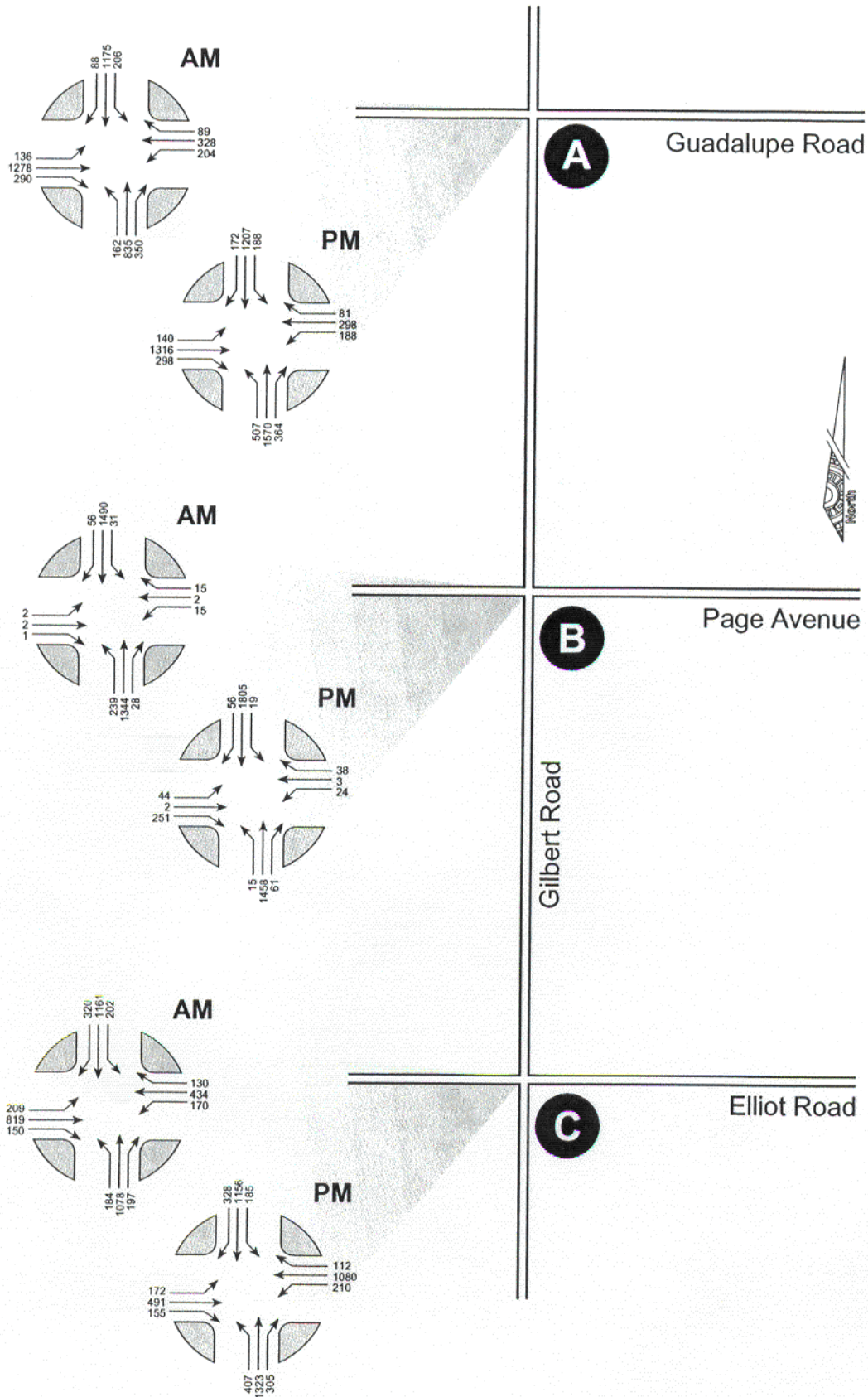
IV. SIGNAL DATA

The signal timing data and traffic signal plans for the intersections of Gilbert Road and Elliot Road, Gilbert Road and Page Avenue, and Gilbert Road and Guadalupe Road are presented in the Appendices. The vehicle arrival type for each intersection is currently a Type 3 (random arrival). There is the possibility with future signal coordination for the arrival type to be more platoon oriented. The platoons would arrive just prior to the green phase for the major movements. The exception would be Page Avenue traffic, which will probably remain a Type 3.



Gilbert Road Park and Ride Lot

Figure 3
2010 AM/PM Peak Hour
Traffic Volumes



Gilbert Road Park and Ride Lot

Figure 4
2020 AM/PM Peak Hour
Traffic Volumes

Attachment D

**Town of Gilbert Park-and-Ride Lot Noise Analysis Technical
Memorandum; S.R. Beard & Associates, LLC.**

**TOWN OF GILBERT
PARK-AND-RIDE LOT
NOISE ANALYSIS
TECHNICAL MEMORANDUM**

DRAFT

**Prepared for:
Town of Gilbert,
Regional Public Transportation Authority,
Arizona Department of Transportation and
Federal Highway Administration**



**Prepared by:
S. R. Beard & Associates**

March 26, 2001

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A	Noise Measurement Information
B	Noise Analysis Work Sheets

1.0 INTRODUCTION

1.1 OVERVIEW

This *Noise Analysis Technical Memorandum* provides an analysis of the anticipated noise impacts due to construction of a park-and-ride lot in the Town of Gilbert. It begins with a description of the project. Section 2.0 discusses noise fundamentals and the criteria that are used to assess impacts. A description of the existing noise environment is presented in Section 3.0. The noise analysis is provided in Section 4.0.

1.2 PROJECT BACKGROUND AND DESCRIPTION

The Town of Gilbert is expecting to lose an existing park-and-ride lot in the center of town that is shared with a church, the owner of the property. The existing site, at the northwest corner of Gilbert Road and Vaughn Avenue, offers only 25 parking spaces. A new site for an upgraded facility is planned to accommodate projected demand and serve as a multi-modal center for local/express buses and for future planned rail service. The future park-and-ride lot would be a central transfer point for Valley Metro express bus riders who are commuting between Gilbert and the Phoenix Central Business District.

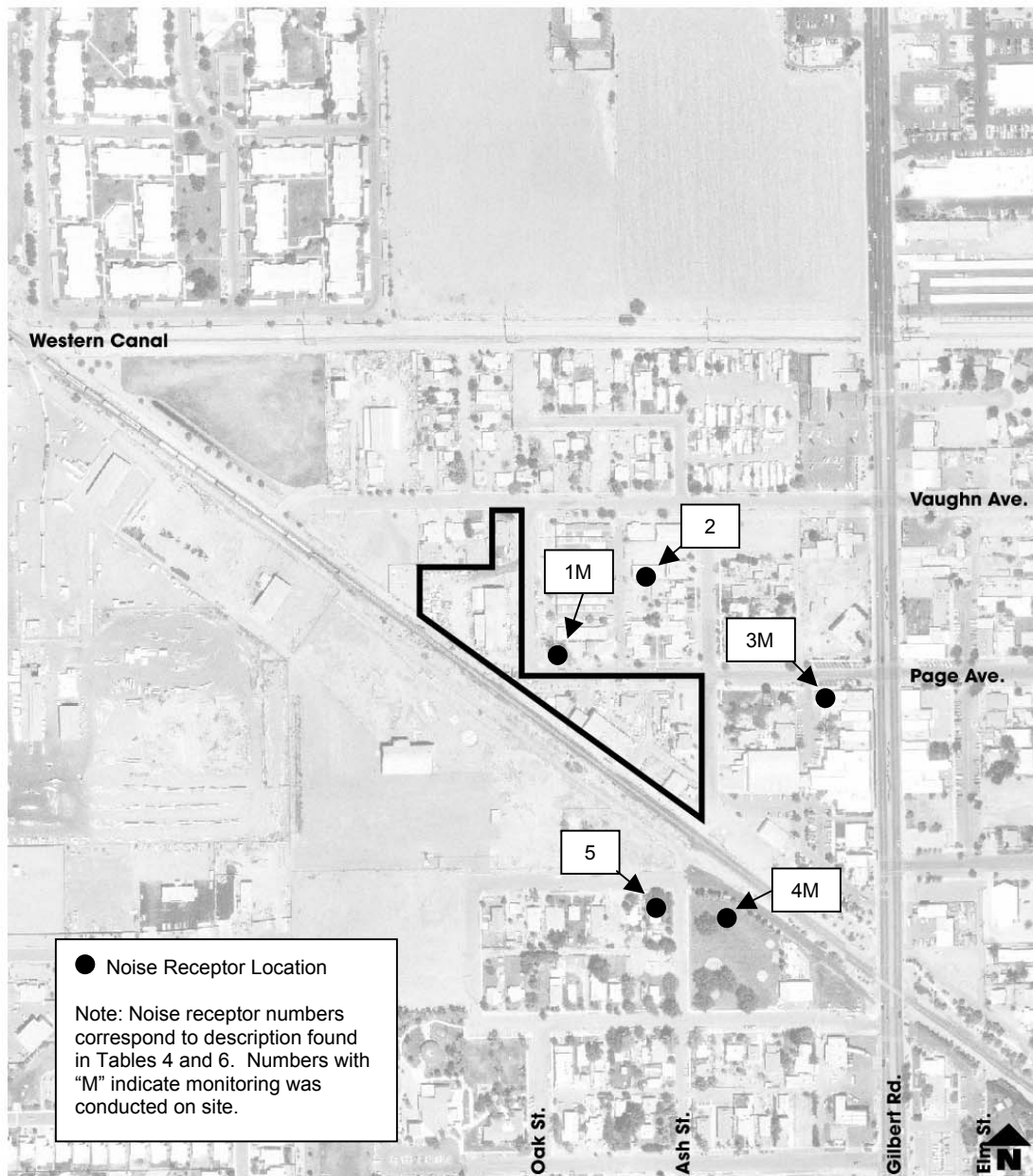
The proposed location of the Gilbert Park-and-Ride is the southwest corner of Page Avenue and Ash Street (see Figure 1, which also shows noise-sensitive uses in the vicinity). The site is located within the Town of Gilbert Heritage District and is approximately 3 acres. Access to U.S. 60 (Superstition Freeway) is provided via Gilbert Road. The location of the park-and-ride could benefit local businesses since commuters will be boarding and alighting just west of the commercial core. The park-and-ride could also provide opportunities for joint use, redevelopment, and improved lighting and streetscape design.

The Gilbert Park-and-Ride may include:

- ◆ 200-250 parking spaces
- ◆ Several bays for buses to park while passengers board and alight
- ◆ Shelters for shade and weather protection
- ◆ Passenger amenities (seating, schedule information, etc.)
- ◆ Landscaping
- ◆ Public art

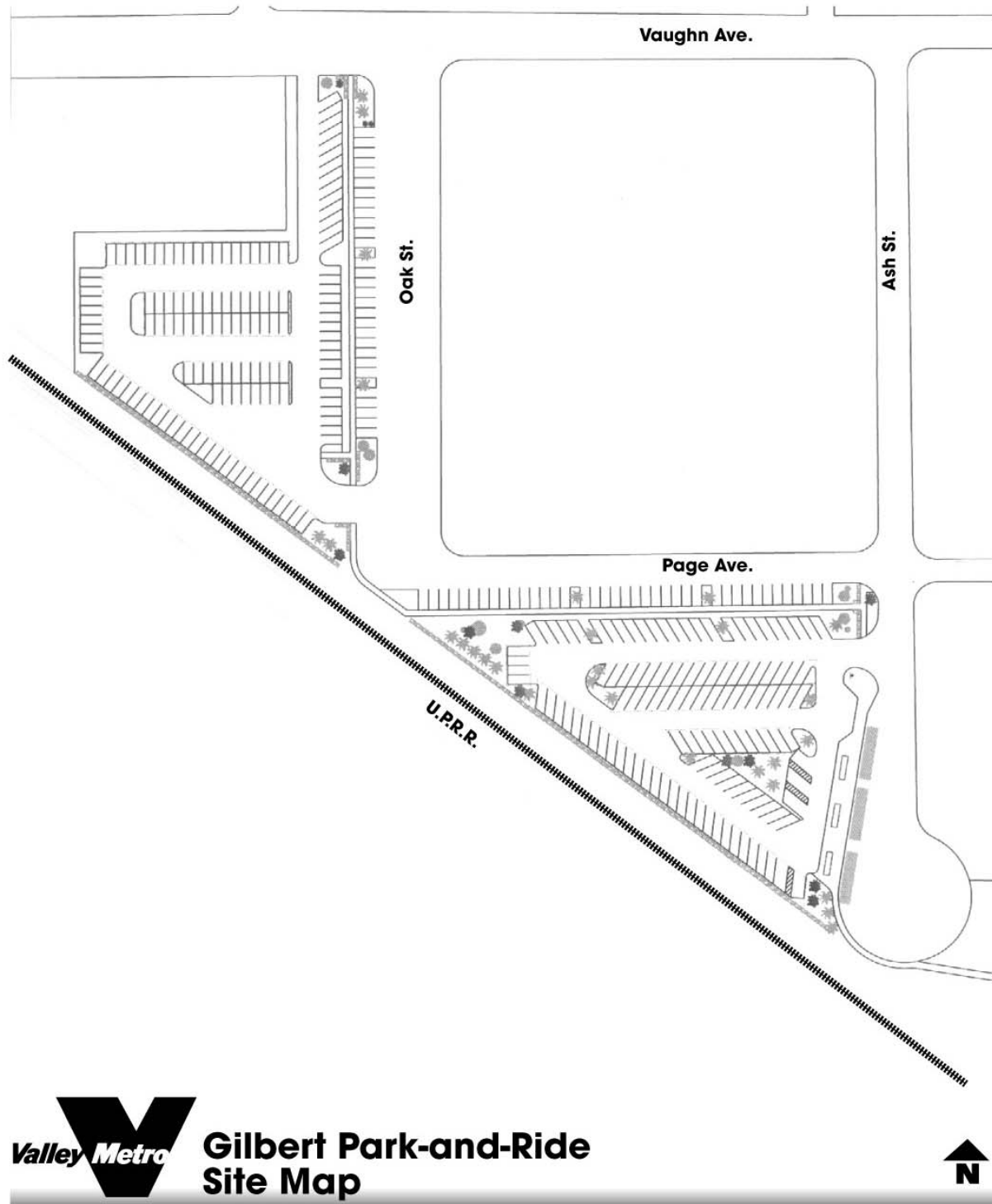
The planned layout of the facility is displayed in Figure 2.

FIGURE 1 – NOISE RECEPTOR LOCATIONS



Valley Metro **Gilbert Park-and-Ride Preferred Site Location**

FIGURE 2 – PLANNED LAYOUT OF THE PARK-AND-RIDE LOT



2.0 NOISE FUNDAMENTALS AND IMPACT CRITERIA

2.1 FUNDAMENTALS

Noise levels are expressed in units called decibels (dB). Since the human ear does not respond equally to all frequencies (or pitches), measured sound levels (in dB at standard frequency bands) are often adjusted or weighted to correspond to the frequency of human hearing and the human perception of loudness. The weighted sound level is designated as the A-weighted sound level in decibels (abbreviated "dBA").

Noise levels which correlate with human perception are expressed in such descriptors as L_{eq} , L_{dn} , and L_{max} . The L_{eq} (or equivalent noise level) is the level of a constant sound in dBA, which, in a given situation and time period, has the same sound energy as does the time-varying sound over the same period. One-hour equivalent noise levels measured every hour over a continuous 24-hour period are sometimes used to calculate a composite 24-hour noise exposure measure called the day-night sound level (L_{dn}), which applies a 10-dBA penalty to nighttime sound levels between the hours of 10:00 PM and 7:00 AM to account for the increased noise-sensitivity of people during sleeping hours. L_{max} is the maximum passby sound level.

Use of L_{eq} and L_{dn} is appropriate for transportation noise analysis because these levels are sensitive to both the frequency of occurrence and duration of noise events, including bus operations which may be characterized by infrequent noise. Typical L_{dn} sound levels are presented in Figure 3.

The average ability of an individual to perceive changes in noise levels is well documented. Generally, changes in noise levels less than 3 dBA will be barely perceived by most listeners, whereas a 10 dBA change normally is perceived as a doubling (or halving) of noise levels. The general principles on which most noise acceptability criteria are based is that a change in noise is likely to cause annoyance wherever it intrudes upon the existing noise from all other sources (i.e., annoyance depends upon the noise that exists before the introduction of a new sound).

2.2 IMPACT CRITERIA

Selection of Methodology and Criteria for Assessing Impacts

The noise analysis for the park-and-ride lot was prepared using the methodology and criteria outlined in the Federal Transit Administration's (FTA), *Transit Noise and Vibration Impact Assessment*, April 1995. Although the environmental work is being conducted for Arizona Department of Transportation (ADOT) and Federal Highway Administration (FHWA), and ADOT's noise analysis methodology normally employs the use of the FHWA's STAMINA 2.0/OPTIMA noise model and FHWA noise abatement criteria for highway projects, the FTA methodology was determined by S. R. Beard & Associates staff, with concurrence of ADOT Environmental Planning Group staff, to be better suited to this project.

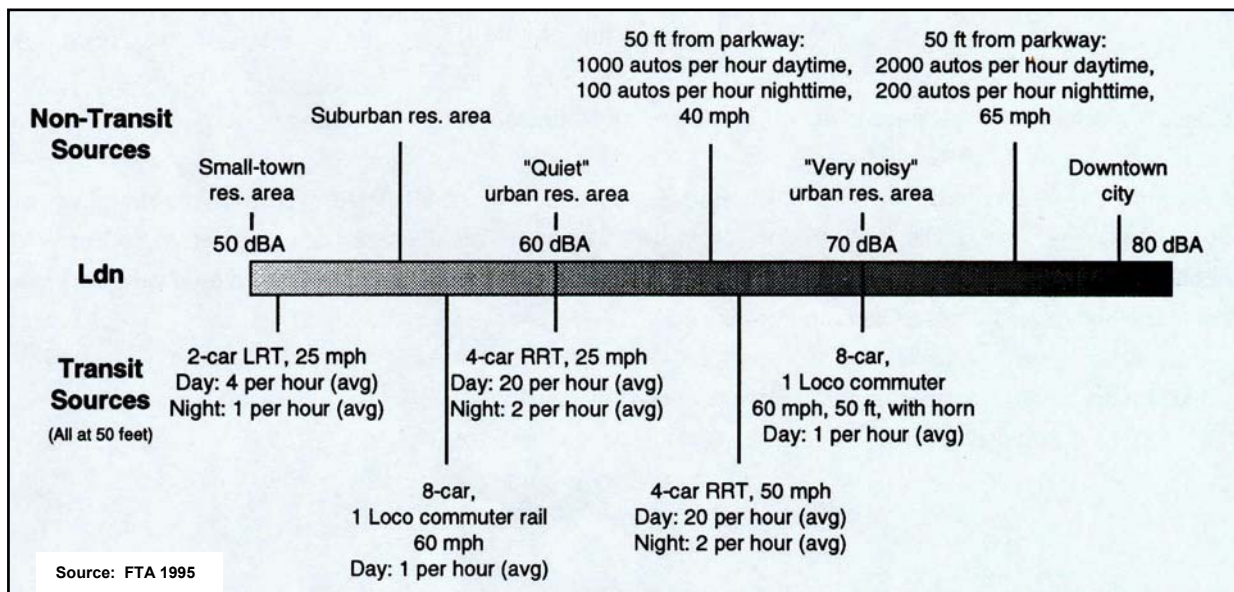


FIGURE 3
TYPICAL L_{dn} 's

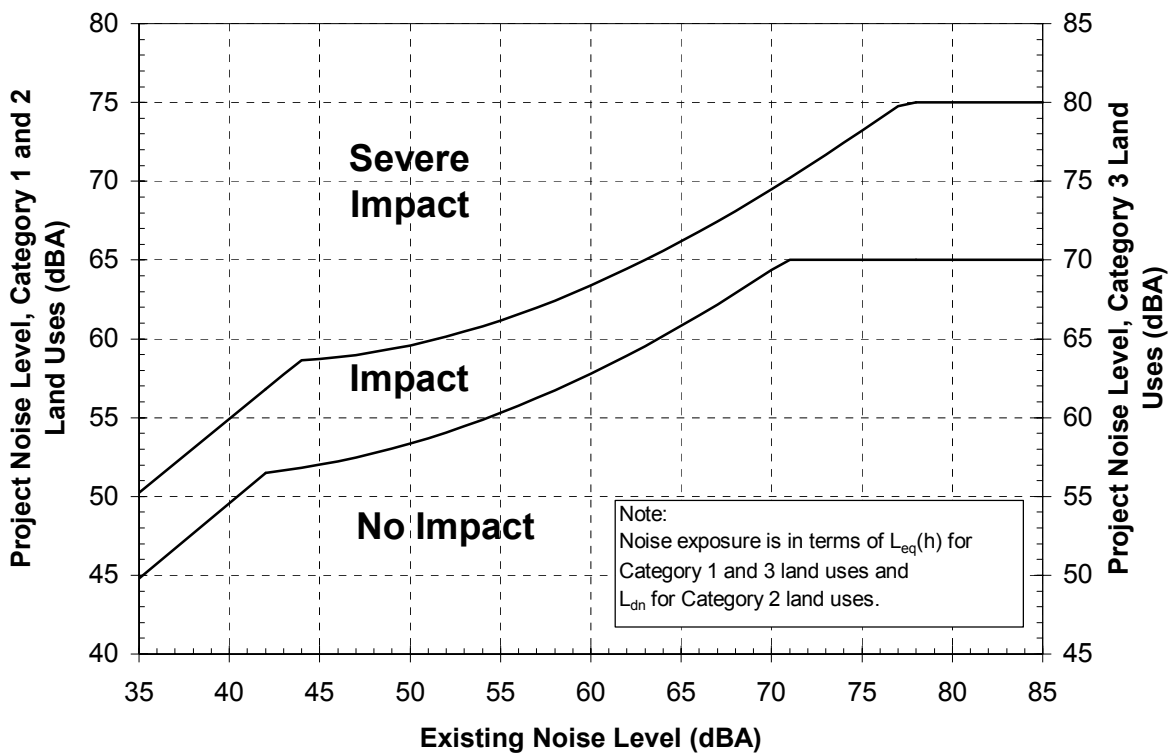


FIGURE 4
NOISE IMPACT CRITERIA FOR TRANSIT PROJECTS

The STAMINA 2.0/OPTIMA noise model and application of FHWA's noise abatement criteria are preferable for projects involving construction of new highways or major improvements to existing ones. However, this project involves no improvements to any of the existing roadways. The FHWA model only calculates speeds within the range of 30 to 65 miles per hour, and the maximum speed of traffic on the local streets surrounding the planned lot is 25 miles per hour or less. Traffic activity on the local streets is low and comparable to those found in most neighborhoods. In addition, the FHWA methodology does not calculate noise levels of idling buses. This is a major source of noise at park-and-ride lots that should not be overlooked. Also, the existing noise levels in the project area are not dominated by traffic sources, but by the surrounding industrial uses, which will be eliminated with implementation of the park-and-ride lot. There also is a railroad track adjacent to the site, and the freight train operations sometimes dominate the noise environment. It would be difficult to predict existing (to calibrate the FHWA model) and/or future No-Build noise levels for comparison with future project levels since the FHWA methodology is based on prediction of roadway traffic noise levels only.

For these reasons, the methodology and criteria contained in the FTA's guidance document cited above will be used to assess the impacts of the Town of Gilbert's planned park-and-ride lot. The methodology can predict bus passby and idling bus noise levels (expected to be the two most significant noise sources) for this project. FTA specifically developed the methodology and criteria to apply to projects such as park-and-ride lots.

Federal Transit Administration Criteria

The FTA noise criteria are based on a comparison of the transit system noise with the outdoor ambient noise from other sources in the community. They incorporate both absolute criteria, which consider activity interference caused by the transit system alone, and relative criteria, which consider annoyance due to the change in noise environment caused by the transit system. The FTA criteria evaluate noise impact on the basis of cumulative, A-weighted noise exposure, in terms of either L_{eq} or L_{dn} . L_{dn} is applied to residences and other buildings where people normally sleep, and L_{eq} is applied to all other noise-sensitive land use categories.

Based on extensive social survey data relating noise exposure to annoyance, two levels of noise impact are included in the FTA criteria as follows:

- ◆ Severe: Severe noise impacts are considered "significant" as this term is used in the National Environmental Policy Act (NEPA) and implementing regulations. Noise mitigation will normally be specified for severe impact areas unless there is no practical mitigation measure.
- ◆ Impact: In this range, other project-specific factors must be considered to determine the magnitude of the impact and the need for mitigation. These other factors can include the predicted increase over existing noise levels, the types and numbers of noise-sensitive land uses affected, existing outdoor-to-indoor sound insulation, and the cost effectiveness of mitigating noise to more acceptable levels.

Under the FTA criteria, the extent of potential noise impact depends on land use category. The three land use categories are described in Table 1. Figure 4 and Table 2 describe in graphic and tabular form the absolute noise impact criteria. The first column of Table 2 displays the existing noise levels (without the project). The other columns show the noise levels from the transit project alone that would result in a determination of no impact, impact, or severe impact depending on the type of land use being considered.

TABLE 1 LAND USE CATEGORIES AND METRICS FOR TRANSIT NOISE IMPACT ASSESSMENT		
Land Use Category	Noise Metric (dBA)	Description of Land Use Category
1	Outdoor $L_{eq}(h)$ ¹	Tracts of land where quiet is an essential element in their intended purpose. This category includes lands set aside for serenity and quiet, and such land uses as outdoor amphitheaters and concert pavilions, as well as National Historic Landmarks with significant outdoor use.
2	Outdoor L_{dn}	Residences and buildings where people normally sleep. This category includes homes, hospitals, and hotels where nighttime sensitivity to noise is assumed to be of utmost importance.
3	Outdoor $L_{eq}(h)$ ¹	Institutional land uses with primarily daytime and evening use. This category includes schools, libraries, and churches where it is important to avoid interference with such activities as speech, meditation, and concentration on reading material. Buildings with interior spaces where quiet is important, such as medical offices, conference rooms, recording studios, and concert halls fall into this category. Places for meditation or study associated with cemeteries, monuments, museums. Certain historical sites, parks, and recreational facilities are also included.
¹ L_{eq} for the noisiest hour of transit-related activity during hours of noise sensitivity. Source: <i>Transit Noise and Vibration Impact Assessment</i> , FTA, April 1995.		

The allowable increases in cumulative noise exposure are presented in Table 3. Impacts are assessed on a sliding scale such that the allowable increase in overall noise exposure from the transit system decreases as the ambient community noise increases. For example, in residential areas (Category 2) with an ambient L_{dn} of 60 dBA, the criteria limit the noise exposure increase to 2 dBA for impact and to 5 dBA for severe impact. However, in residential areas with an ambient L_{dn} of 70 dBA, the increases are limited to 1 dBA for impact and to 3 dBA for severe impact.

TABLE 2 NOISE LEVELS DEFINING IMPACTS FOR TRANSIT PROJECTS						
Existing Noise Exposure Leq or Ldn (dBA)	Project Noise Impact Levels, Leq or Ldn (dBA)					
	Category 1 or 2 Sites			Category 3 Sites		
	No Impact	Impact	Severe Impact	No Impact	Impact	Severe Impact
<43	<Ambient +10	Ambient+10-15	>Ambient+15	<Ambient +15	Ambient+15-20	>Ambient+20
43	<52	52-58	>58	<57	57-63	>63
44	<52	52-58	>58	<57	57-63	>63
45	<52	52-58	>58	<57	57-63	>63
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72	<66	66-71	>71	<71	71-76	>76
73	<66	66-71	>71	<71	71-76	>76
74	<66	66-72	>72	<71	71-77	>77
75	<66	66-73	>73	<71	71-78	>78
76	<66	66-74	>74	<71	71-79	>79
77	<66	66-74	>74	<71	71-79	>79
>77	<66	66-75	>75	<71	71-80	>80
Note: Ldn is used for where nighttime sensitivity is a factor; Leq during the hour of maximum transit noise is used for land uses involving only daytime activities. Source: <i>Transit Noise and Vibration Impact Assessment</i> , FTA, April 1995.						

TABLE 3 ALLOWABLE INCREASES IN CUMULATIVE NOISE LEVELS				
Existing Noise Exposure L _{eq} or L _{dn} (dBA)	Noise Exposure Increase (L _{eq} or L _{dn} [dBA])			
	Category 1 or 2 Sites		Category 3 Sites	
	Impact	Severe Impact	Impact	Severe Impact
55	3	7	6	12
56	3	7	6	11
57	3	6	6	10
58	2	6	5	10
59	2	5	5	9
60	2	5	5	9
61	1.9	5	4	9
62	1.7	4	4	8
63	1.6	4	4	8
64	1.5	4	4	8
65	1.4	4	3	7
66	1.3	4	3	7
67	1.2	3	3	7
68	1.1	3	3	6
69	1.1	3	3	6
70	1.0	3	3	6
71	1.0	3	3	6
72	0.8	3	2	6
73	0.6	2	1.8	5
74	0.5	2	1.5	5
75	0.4	2	1.2	5
Source: <i>Transit Noise and Vibration Impact Assessment</i> , FTA, April 1995.				

3.0 EXISTING NOISE ENVIRONMENT

3.1 AMBIENT NOISE LEVELS

To provide an indicator of the baseline noise conditions within the project area, this section presents the results of noise readings that were taken at three representative sensitive land uses. The noise monitoring follows FTA's Option 3 methodology for residential land uses, which consists of measuring hourly Leq for three representative hours of the day (during peak-hour roadway traffic, midday between morning and evening peak traffic, and late night) and then computing Ldn. The noise measurements were conducted using a Bruel & Kjaer Model 2238 Navigator (Type I) Integrating Sound Level Meter. The results of the monitoring are presented in Table 4. Figure 1, presented in Section 1.0, displays the monitoring locations (those denoted with an "M" after the number) as well as all locations that were considered in the noise analysis presented in Section 4.0.

TABLE 4 EXISTING NOISE LEVELS						
No. ¹	Site		Time of Day			dBA Ldn ²
			Peak Hour	Midday	Late Night	
1M	Apartments at 325 N. Oak St.	Date of Measurement	Feb. 22	Feb. 22	March 9	51
		Time Measurement Began	3:55 PM	10:53 AM	12:02 AM	
		dBA Leq	53	53	44	
3M	House behind Liberty Market on Page Ave.	Date of Measurement	Mar. 6	Feb. 22	March 9	60
		Time Measurement Began	4:50 PM	12:56 PM	1:11 AM	
		dBA Leq	60	61	54	
4M	Poco Verde Park	Date of Measurement	Mar. 6	Feb. 22	March 9	55
		Time Measurement Began	3:42 PM	2:13 PM	2:26 AM	
		dBA Leq	54	51	50	

¹Number corresponds to number shown in Figure 1.
²dBA Ldn was computed using FTA's Option 3 methodology as described in *Transit Noise and Vibration Impact Assessment*, Appendix C.

3.2 LOCATIONS OF THE MONITORING

Shown below are the specific monitoring sites for the three locations where noise level readings were conducted. The noise measurement data sheets and site sketch plans are included as Appendix A.

1M-Apartments at 325 North Oak. Measurements were taken adjacent to the back yards of the apartment building located at the northeast corner of Page Avenue/Oak Street. The meter was set about 57 feet north of Page Avenue and about 87 feet east of Oak Street.

3M-House behind Liberty Market on Page. Measurements were taken adjacent to the residence on the west side of Liberty Market. The meter was set about 22 feet south of Page Avenue and about 30 feet east of the alley that is located between Gilbert Road and Ash Street.

4M-Poco Verde Park. Measurements were taken in the park about five feet north of the horse merry-go-round and about 73 feet east of Ash Street.

4.0 NOISE ANALYSIS

4.1 INTRODUCTION

The noise analysis was prepared using the FTA Detailed Noise Assessment procedure as described in FTA's *Transit Noise and Vibration Impact Assessment*, April 1995. The procedure calls for assessing the noise levels due to the project that result from bus passbys and buses idling at the park-and-ride lot while waiting for passengers to board and alight. The FTA methodology stipulates that these are the two major sources of noise that should be considered for this type of project.

4.2 MAJOR ASSUMPTIONS

The major assumptions used in the detailed analysis are shown in Table 5. The noise exposure for a noise-sensitive receptor near the proposed park-and-ride lot depends on the distance from the location where the buses will pass by on the street to access the lot as well as the distance from the location where the buses will temporarily idle in the bus bays while waiting for passengers to board and alight. Also affecting the noise levels are the anticipated bus volumes, travel speeds, idling times, and whether there will be intervening buildings or other barriers between the noise-sensitive receptor and the noise-generating activity. In addition, the type of ground (i.e., "hard" [such as paved surfaces] or "soft" [such as grass]) existing between the receptor and the noise-generating activity has a bearing on how sound propagates.

4.3 NOISE ASSESSMENT RESULTS

The project noise levels were compared to the existing sound levels at the noise-sensitive uses near the planned park-and-ride lot. The comparison was done to determine the impact level per FTA criteria (i.e., no impact, impact, or severe impact) as discussed in Section 2.0. The results of the analysis are presented in Table 6. The noise analysis worksheets, which include the specific input data and calculations for each receptor, can be found in Appendix B.

As shown in Table 6, the project will result in no adverse impacts on any of the five noise-sensitive receptors in the vicinity. Note also that the Town of Gilbert plans to acquire the multi-family apartment buildings at 325 North Oak Street (Receptor #1M) and also the apartment building (Receptor #2) behind the house at 318 Ash Street as part of the Town's Heritage Redevelopment project. The house at 318 Ash Street has already been purchased by the Town for the redevelopment project and will be demolished in the near future. Therefore, it was not included in the noise analysis.

Because the project is not expected to have any adverse noise impacts on sensitive uses, no mitigation measures are required.

TABLE 5 MAJOR ASSUMPTIONS USED IN THE DETAILED NOISE ANALYSIS	
Bus Passbys	
Reference SEL ¹ ♦ 2-axle bus ♦ 3-axle bus	84 dBA 88 dBA
Volumes during noisiest hour for determining Leq ² : ♦ 2-axle bus (incoming) ♦ 2-axle bus (outgoing) ♦ 3-axle bus (incoming and outgoing)	3 3 0
Average hourly volumes during daytime (7 am to 10 pm) and nighttime (10 pm to 7 am) for determining Ldn ² : ♦ 2-axle bus daytime (incoming) ♦ 2-axle bus daytime (outgoing) ♦ 2-axle bus nighttime (incoming) ♦ 2-axle bus nighttime (outgoing) ♦ 3-axle bus daytime (incoming and outgoing) ♦ 3-axle bus nighttime (incoming and outgoing)	0.73 0.73 0.56 0.56 0 0
Speed	15 mph
Idling Buses	
Reference SEL ¹	111 dBA
♦ Number buses idling during noisiest hour for determining Leq ³ ♦ Average duration of each bus idling during noisiest hour ♦ Number buses idling for determining Ldn ³ : -Daytime (average hourly) -Nighttime (average hourly) ♦ Average duration of each bus idling during: -Daytime -Nighttime	3 5 minutes 0.73 0.56 2:48 minutes 5 minutes
¹ Reference SELs for bus passbys are at 50 feet and 50 mph and for idling buses are at 50 feet per FTA's <i>Transit Noise and Vibration Impact Assessment</i> , April 1995. ^{2,3} Source: Draft <i>Express Bus Plan</i> , Regional Public Transportation Authority.	

TABLE 6 NOISE ANALYSIS RESULTS						
No. ¹	Land Use Category ²	Site	Existing Noise Level		Project Induced Noise dBA ⁴	Level of Impact
			dBA Ldn	dBA Leq		
1M	2	Apartments at 325 N. Oak St.	51		50	No Impact
2	2	Apartments behind (west of) 318 Ash St.	51 ³		48	No Impact
3M	2	House behind Liberty Market on Page Ave.	60		46	No Impact
4M	3	Poco Verde Park		54	46	No Impact
5	2	House at 101 Cullumber Ave.	55 ³		47	No Impact
¹ Number corresponds to number shown in Figure 1. An "M" denotes that monitoring was conducted at this location. ² Land use category as shown in Table 1. ³ Existing noise levels were estimated based on noise level measurements taken at nearby sites. ⁴ Project noise levels are shown in dBA Ldn for Category 2 (residential) sites and in dBA Leq for Category 3 (park) sites.						

Attachment E

**Air Quality Impact Analysis for the Proposed Gilbert Park-
and-Ride Lot; Air Quality Management Consulting**

Revised Final Report

**AIR QUALITY IMPACT ANALYSIS FOR THE
PROPOSED GILBERT PARK & RIDE LOT**

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AIR QUALITY IMPACT ANALYSIS FOR THE PROPOSED GILBERT PARK & RIDE LOT

OVERVIEW

A park & ride lot has been proposed for development at Page near North Gilbert in Gilbert Arizona. This project will result in additional vehicle activity on Page and on North Gilbert between Guadalupe and Elliot. As such, a project-level conformity analysis is required to demonstrate that any existing exceedances of the national ambient air quality standard (NAAQS) for carbon monoxide (CO) will not be aggravated, and that no new exceedances will be caused as a result of the project. Procedures for conducting such analyses are set forth in guidance provided by the U.S. Environmental Protection Agency (EPA, 1992). This report summarizes the results of this analysis.

CO concentrations are highest near congested intersections. Due to the nature of this project, the three closest signalized intersections were selected for analysis. Computer simulation modeling was conducted using the MOBILE5a emission factor model (EPA, 1994) and the CAL3QHC version 2.0 roadway dispersion model (EPA, 1995). Traffic volumes, intersection geometry, roadway characteristics, and signal timing information were initially prepared by Aztec Engineering (2001) and S.R. Beard Associates, LLC in March 2001, and revised in June. Analyses were conducted for the intersections of North Gilbert at Guadalupe, Page, and Elliot for current conditions (nominally, December 2001), and for "build" and "no-build" scenarios for 2010 and 2020.

The results of the analysis show that the CO NAAQS is not currently exceeded near any of the intersections, and that future year concentrations for both "build" and "no-build" scenarios are lower still.

INTERSECTION SELECTION AND SCENARIOS

The proposed park & ride lot at Page is expected to accommodate approximately 200 vehicles arriving during the morning traffic peak and leaving during the evening traffic peak. Some portion of these represent trips already occurring or projected to occur along Gilbert, but others may be attracted to the lot from trips along other roadways. An increase in peak hour traffic volumes is projected for the intersection of Page and Gilbert. Volumes will also be affected (positively for trips diverting onto Gilbert to the lot, and negatively for trips already on Gilbert that will terminate at the lot) at the intersections of Guadalupe and Gilbert, and Elliot and Gilbert. Influences at other intersections will be smaller. Therefore, the analysis of project impacts was limited to these three intersections.

Traffic patterns at these intersections differ between morning and evening peak hours, and signal phase timing is changed to address these differences. Although total traffic volumes are highest during the evening peak hour, scenarios were developed and modeled for both morning and evening peaks to verify that differences in flow patterns do not result in higher concentrations during the morning peak. Scenarios selected for analysis include current conditions (winter CO season, 2001), and forecasted conditions

for 2010 and 2020, both without the lot ("no-build" scenarios), and with the lot and its associated changes in traffic volumes ("build" scenarios).

INTERSECTION GEOMETRY, SIGNAL TIMING, AND RECEPTOR LOCATIONS

The intersections of Gilbert at Guadalupe and at Elliot include dedicated left turn lanes and signals, while Gilbert and Page has no left turn lanes, and uses a two phase signal pattern. Scale drawings of the intersections obtained from the Town of Gilbert were used to develop detailed descriptions of intersection link segments as required by CAL3QHC. For each intersection, the coordinates of stop lines, corners, curb faces, and lane boundaries were determined, referenced to an origin in the center of the intersection. These coordinates were used to develop the specific link characteristics required by the model for "free-flow" links and "queue" links. Tables 1, 2, and 3 list the specific coordinates and characteristics of these links¹. Speeds shown for free-flow links are 5 mph less than posted speed limits, except for Page, which is assigned a speed of 16 mph.

For the intersections at Guadalupe and at Elliot, a total of 16 links are needed. For each approach, there are three links: a free-flow link terminating in the middle of the intersection whose traffic volume is the sum of all approaching traffic (left turn, through and right-turn); a queue link whose volume is the sum of approaching through and right turn traffic); and a left-turn queue link assigned the left turn volumes. A fourth free-flow link represents outbound flow, including the sum of through traffic and the corresponding right turn and left turn volumes onto the link.

The intersection of Gilbert and Page has no left turn lanes. Therefore, there are only two links per approach (free-flow and queue), and one free-flow link for the departure.

Signal timing information was provided in Aztec (2001) from the Town of Gilbert. These data included the total cycle time, as well as the percent of time allocated to each phase. Each intersection's timing was different, and changed from morning peak to evening peak. Red time in seconds, as required by CAL3QHC for each queue link, was calculated from these data. The EPA default value of two seconds was used for clearance-lost time. Similarly, the EPA default value for lane capacity of 1600 vehicles per hour of green was used. An arrival rate input of '3' (average progression) was used for all queue links.

Modeling was conducted to predict concentrations at a total of 36 receptor locations around each intersection. Per EPA guidance, receptors were placed as close as possible, but not closer than three meters (ten feet) from the edge of the travelled way at each corner, and along all approach and departure legs. Receptor height was set to 5.9 feet (1.8 m). Tables 4, 5, and 6 list the receptor coordinates at each intersection. Receptors designated "a1" to "a4" are spaced along the approach leg at distances of 50, 100, 200, and 400 feet from the corner receptor. Those designated "d1" to "d4" are spaced the same distances along the departure leg, again measured from the corner receptor. Receptors along the eastbound approach and depart legs of Page and on the westbound approach on Page are set further than ten feet from the roadway edge, as drawings show

¹ Tables and figures are located at the end of this report.

diagonal parking spaces that preclude receptor siting at 10 feet. Figures 1, 2 and 3 show link locations, the roadway edge (curb face or edge of travelled way), and receptor locations for each intersection. The proposed park & ride lot is located to the west of Gilbert and Page (Figure 2). Figure 4 shows the proposed layout of the facility in relation to the coordinate system used in modeling this intersection. The coordinates of the center of the intersection of Page and Ash are (-395, 0). Figure 4 also shows the approximate location of receptor EBa4 at (-441, -31).

EMISSION FACTOR DEVELOPMENT

On-road vehicle emission factors are produced by the EPA MOBILE5a model based on inputs that characterize vehicle fleet composition, inspection and maintenance (I/M) program provisions, and other information. For this analysis, the MOBILE5a inputs used by the Maricopa Association of Governments (MAG) for their most recent (2000) conformity analysis for their Transportation Improvement Program (TIP) were obtained from MAG². These inputs addressed winter (December) conditions and fleet characteristics for the years 2001, 2010, and 2020. Different sets of inputs were used to represent the differences in I/M programs that apply to individual vehicles that may be operated within the MAG planning area. These include:

- No I/M program conditions
- The Arizona I/M program with no waivers
- The Arizona I/M program with waivers.

The MOBILE5a model was exercised with these nine sets of inputs (three I/M scenarios for each of three calendar years), producing emission rates for different speeds and ambient temperatures. Per EPA guidance, this analysis is based on an ambient temperature of 53.6° F, the monthly mean temperature for January³. Emission factors for this temperature were obtained by interpolation of emission factors at 50° and 60°. Idle emission factors in g/h as required by CAL3QHC were calculated according to EPA guidance as the gram per hour rate equivalent of the g/mi rate for 2.5 mph.

Fleet average emission rates for each of the three years were obtained by calculating a weighted average of the three I/M scenario assumptions. Based on local data, MAG estimates that 89.6 percent of vehicles are subject to I/M, and for this group, the emission factors are estimated as a weighted average of two MOBILE5a runs: a run with waivers weighted 33.3 percent and a run with no waivers weighted 66.7 percent. The remaining 10.4 percent are assumed not to be subject to an I/M program. The weighted average emission rates for idle and for 16, 35, and 40 mph are shown in Table 7 for each of the analysis years.

TRAFFIC VOLUMES

Traffic volumes for the 2001 "no-build" scenarios are fully documented in Aztec (2001) for each of the three intersections. Peak hour base year values for through, left turn, and

² Personal communication from Roger Roy, MAG, February 7, 2001

³ <http://www.ncdc.noaa.gov/ol/climate/online/ccd/meantemp.html>

right turn movements were derived from 15-minute data. These were used to develop 2010 and 2020 AM and PM peak period volumes and turning movements for "no-build" scenarios.

Further analyses by Aztec Engineering and S. R. Beard Associates produced revised volumes for 2010 and 2020 "build" scenarios based on trip generation and route choice estimates reflecting the effects of the park & ride lot. For each intersection, a total of ten scenarios was modeled: an AM and PM peak hour "no-build" scenario for each of three analysis years, and AM and PM peak hour "build" scenarios for 2010 and 2020. The traffic volumes for these scenarios as revised in June 2001 are listed in Tables 8, 9 and 10.

MODELING RESULTS

CAL3QHC modeling was conducted using worst-case assumptions as specified in EPA guidance. Meteorological conditions of D stability, 1.0 m/s windspeed were modeled for 36 wind directions (0 to 350° by 10° steps). Surface roughness was conservatively specified as 108 cm, corresponding to single-family residential land use. The primary modeling result obtained is the maximum one-hour average over all receptor locations for each scenario. Table 11 lists these predicted one-hour maxima for each intersection and scenario. Maximum 8-hour average concentration contributions from each intersection are estimated by multiplying the one-hour values by the EPA default persistence factor of 0.7. The maximum one-hour average predicted in any scenario is 5.9 ppm, and occurred at Guadalupe and Gilbert in 2001 ("no-build"). The corresponding maximum 8-hour concentration based on the persistence factor is 4.13 ppm.

To assess whether concentrations may exceed the CO NAAQS, total maximum one-hour average concentration is calculated by adding the observed maximum one-hour concentration observed at the closest ambient monitoring station. Similarly, total maximum 8-hour averages are estimated by adding the persistence-factor-adjusted contribution from the intersection and observed maximum 8-hour averages. Data reports were produced by the Maricopa County Environmental Services Department showing the ten highest one-hour and ten highest 8-hour average concentrations at their Gilbert Water Treatment Plant monitoring station between January 1, 1997 and September 1, 2000. This monitoring station is slightly more than one mile from each of the studied intersections. The maximum one-hour average concentration measured during this period was 4.6 ppm, and the maximum 8-hour average measured concentration was 2.7 ppm. Thus the combined maximum one-hour average is $5.9 + 4.6 = 10.5$ ppm. This is below the 35 ppm value of the CO one-hour average NAAQS. The maximum combined 8-hour average is $4.13 + 2.7 = 6.8$ ppm, which is below the 9 ppm value of the CO 8-hour average NAAQS. As all other concentrations in Table 11 are less than 5.9 ppm, we conclude that the proposed Page park & ride lot will not aggravate any existing exceedances of the CO NAAQS, nor cause any new exceedances. Table 12 summarizes the calculation of maximum predicted CO concentrations.

A review of model outputs other than maximum concentrations led to two observations regarding projected traffic flow. First, future year scenarios at Guadalupe and at Elliot showed some queue link volumes above nominal capacity. CAL3QHC reports a volume:capacity ratio (V/C) based on its relatively simple queue length algorithm. In this

case, modeling was conducted with relatively conservative assumptions regarding both lane capacity and arrival rate quality of progression. Nevertheless, traffic volumes projected for future years do appear sufficiently large to adversely affect the level of service at these intersections.

A second observation relates to the effect of projected left turns from northbound Gilbert onto Page during the morning peak. This intersection has two northbound lanes and no turn lane, and the traffic signal pattern consists currently of only two phases (N-S green or E-W green). Turning vehicles may queue at the intersection waiting for a gap in southbound traffic, effectively reducing northbound flow to a single lane. Although CAL3QHC is not designed to address this effect for simple intersection configurations, sensitivity simulations were carried out for the 2010 and 2020 "build" scenarios to verify that such effects would not significantly affect CO concentrations. These simulations altered the signal timing by lengthening the red period for southbound traffic by eight seconds (from 24 to 32 seconds), while allowing northbound approach traffic to continue. In effect, this added a third "northbound through and left-turn" phase. In addition, the northbound queue link capacity was reduced by half to simulate complete blockage of the left of the two northbound lanes. Maximum one-hour concentrations for these simulations were 1.5 ppm for 2010 and 1.4 ppm for 2020. These concentrations are 0.3 ppm higher than the nominal "build" scenario results, but are still well below the level at which NAAQS exceedances might occur.

CONCLUSIONS

Emissions and dispersion modeling was conducted according to applicable EPA guidance using inputs consistent with the most recent MAG TIP conformity analysis to verify whether the carbon monoxide impacts of the proposed Page park & ride lot are acceptable. Modeling results showed that concentrations predicted for the initial analysis year (2001) are higher than those for future years, and that concentrations are higher at the intersection of Gilbert and Guadalupe than at Page or Elliot. The highest predicted 8-hour average of 6.8 ppm and the highest predicted one-hour average of 10.5 ppm both occur in the 2001 evening peak "no-build" scenario at Guadalupe. These results, based on conservative screening assumptions regarding (1) the relationship between one-hour and 8-hour average concentrations, and (2) maximum one-hour and 8-hour average background concentrations, show that the CO national ambient air quality standards are not exceeded in any of the analysis years for either "build" or "no-build" scenarios.

REFERENCES

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- EPA (1995). "User's Guide to CAL3QHC Version 2.0: A Modeling Methodology for Predicting Pollutant Concentrations Near Roadway Intersections." EPA-454/R-92-006 (Revised), U.S. Environmental Protection Agency, Research Triangle Park, NC, September 1995.

Table 1(a). Freeflow Link Coordinates and Characteristics -- Gilbert and Guadalupe.

Link ID	Link Endpoint Coordinates (feet)				Speed (mph)
	X1	Y1	X2	Y2	
NB App	27.5	-1500	27.5	0	35
NB Dep	28	0	28	1500	40
SB App	-24	1500	-24	0	40
SB Dep	-24	0	-24	-1500	35
EB App	-1500	-28	0	-28	35
EB Dep	0	-28	1500	-28	35
WB App	1500	24	0	24	35
WB Dep	0	24.5	-1500	24.5	35

Table 1(b). Queue Link Coordinates and Characteristics -- Gilbert and Guadalupe.

Link ID	Link Endpoint Coordinates (feet)				Signal Cycle Duration (sec)		
	X1	Y1	X2	Y2	Total	AM Red	PM Red
NB Queue	27.5	-61	27.5	-1500	94	59	65
NB Q L	3.5	-61	3.5	-276	94	73	79
SB Queue	-24	59	-24	1500	94	65	59
SB Q L	0	59	0	269	94	79	73
EB Queue	-57	-28	-1500	-28	94	65	65
EB Q L	-57	-4	-267	-4	94	79	79
WB Queue	65	24	1500	24	94	65	65
WB Q L	65	0	275	0	94	79	79

Table 2(a). Freeflow Link Coordinates and Characteristics -- Gilbert and Page.

Link ID	Link Endpoint Coordinates (feet)				Speed (mph)
	X1	Y1	X2	Y2	
NB App	13.5	-1500	13.5	0	35
NB Dep	13.5	0	13.5	1500	35
SB App	-13.5	1500	-13.5	0	35
SB Dep	-13.5	0	-13.5	-1500	35
EB App	-1500	-6	0	-6	16
EB Dep	0	-6	1500	-6	16
WB App	1500	6	0	6	16
WB Dep	0	6	-1500	6	16

Table 2(b). Queue Link Coordinates and Characteristics -- Gilbert and Page.

Link ID	Link Endpoint Coordinates (feet)				Signal Cycle Duration (sec)		
	X1	Y1	X2	Y2	Total	AM Red	PM Red
NB Queue	13.5	-27	13.5	-1500	94	24	24
SB Queue	-13.5	27	-13.5	1500	94	24	24
EB Queue	-42	-6	-1500	-6	94	70	70
WB Queue	42	6	1500	6	94	70	70

Table 3(a). Freeflow Link Coordinates and Characteristics -- Gilbert and Elliot.

Link ID	Link Endpoint Coordinates (feet)				Speed (mph)
	X1	Y1	X2	Y2	
NB App	22.5	-1500	22.5	0	35
NB Dep	22	0	22	1500	35
SB App	-22.5	1500	-22.5	0	35
SB Dep	-23	0	-23	-1500	35
EB App	-1500	-23	0	-23	35
EB Dep	0	-23	1500	-23	35
WB App	1500	21	0	21	35
WB Dep	0	22	-1500	22	35

Table 3(b). Queue Link Coordinates and Characteristics -- Gilbert and Elliot.

Link ID	Link Endpoint Coordinates (feet)				Signal Cycle Duration (sec)		
	X1	Y1	X2	Y2	Total	AM Red	PM Red
NB Queue	22.5	-53	22.5	-1500	94	62	64
NB Q L	4.5	-53	4.5	-273	94	75	79
SB Queue	-22.5	53	-22.5	1500	94	66	62
SB Q L	-4.5	53	-4.5	163	94	79	77
EB Queue	-53	-23	-1500	-23	94	65	65
EB Q L	-53	-5.75	-163	-5.75	94	79	79
WB Queue	53	21	1500	21	94	65	65
WB Q L	53	3.75	163	3.75	94	79	79

Table 4. Receptor Coordinates -- Gilbert and Guadalupe.

Receptor Name ⁴	Coordinates (feet)		
	X	Y	Z
NWc	-58	59	5.9
NEc	61	59	5.9
SEc	61	-62	5.9
SWc	-58	-62	5.9
NBa1	55.5	-112	5.9
NBa2	55.5	-162	5.9
NBa3	55.5	-262	5.9
NBa4	55.5	-462	5.9
NBd1	56	109	5.9
NBd2	56	159	5.9
NBd3	56	259	5.9
NBd4	56	459	5.9
EBa1	-108	-56	5.9
EBa2	-158	-56	5.9
EBa3	-258	-56	5.9
EBa4	-458	-56	5.9
EBd1	111	-56	5.9
EBd2	161	-56	5.9
EBd3	261	-56	5.9
EBd4	461	-56	5.9
SBa1	-52	109	5.9
SBa2	-52	159	5.9
SBa3	-52	259	5.9
SBa4	-52	459	5.9
SBd1	-52	-112	5.9
SBd2	-52	-162	5.9
SBd3	-52	-262	5.9
SBd4	-52	-462	5.9
WBa1	111	52	5.9
WBa2	161	52	5.9
WBa3	261	52	5.9
WBa4	461	52	5.9
WBd1	-108	52.5	5.9
WBd2	-158	52.5	5.9
WBd3	-258	52.5	5.9
WBd4	-458	52.5	5.9

⁴ Receptors are named by the corner location (e.g., NWc) or by the direction of flow in the closest lane in numerical sequence from the corner (e.g., WBa1 is the first receptor away from the corner on the westbound approach leg, and SBd2 is the second receptor from the corner on the southbound depart leg).

Table 5. Receptor Coordinates -- Gilbert and Page.

Receptor Name	Coordinates (feet)		
	X	Y	Z
NWc	-41	27	5.9
NEc	41	27	5.9
SEc	41	-27	5.9
SWc	-41	-27	5.9
NBa1	37	-77	5.9
NBa2	37	-127	5.9
NBa3	37	-227	5.9
NBa4	37	-427	5.9
NBd1	37	77	5.9
NBd2	37	127	5.9
NBd3	37	227	5.9
NBd4	37	427	5.9
EBa1	-91	-31	5.9
EBa2	-141	-31	5.9
EBa3	-241	-31	5.9
EBa4	-441	-31	5.9
EBd1	91	-31	5.9
EBd2	141	-31	5.9
EBd3	241	-31	5.9
EBd4	441	-31	5.9
SBa1	-37	77	5.9
SBa2	-37	127	5.9
SBa3	-37	227	5.9
SBa4	-37	427	5.9
SBd1	-37	-77	5.9
SBd2	-37	-127	5.9
SBd3	-37	-227	5.9
SBd4	-37	-427	5.9
WBa1	91	30	5.9
WBa2	141	30	5.9
WBa3	241	30	5.9
WBa4	441	30	5.9
WBd1	-91	22	5.9
WBd2	-141	22	5.9
WBd3	-241	22	5.9
WBd4	-441	22	5.9

Table 6. Receptor Coordinates -- Gilbert and Elliot.

Receptor Name	Coordinates (feet)		
	X	Y	Z
NWc	-51	51	5.9
NEc	51	49	5.9
SEc	51	-51	5.9
SWc	-53	-49	5.9
NBa1	44.5	-101	5.9
NBa2	44.5	-151	5.9
NBa3	44.5	-251	5.9
NBa4	44.5	-451	5.9
NBd1	44	99	5.9
NBd2	44	149	5.9
NBd3	44	249	5.9
NBd4	44	449	5.9
EBa1	-103	-44.5	5.9
EBa2	-153	-44.5	5.9
EBa3	-253	-44.5	5.9
EBa4	-453	-44.5	5.9
EBd1	101	-45	5.9
EBd2	151	-45	5.9
EBd3	251	-45	5.9
EBd4	451	-45	5.9
SBa1	-44.5	101	5.9
SBa2	-44.5	151	5.9
SBa3	-44.5	251	5.9
SBa4	-44.5	451	5.9
SBd1	-45	-99	5.9
SBd2	-45	-149	5.9
SBd3	-45	-249	5.9
SBd4	-45	-449	5.9
WBa1	101	42.5	5.9
WBa2	151	42.5	5.9
WBa3	251	42.5	5.9
WBa4	451	42.5	5.9
WBd1	-101	44	5.9
WBd2	-151	44	5.9
WBd3	-251	44	5.9
WBd4	-451	44	5.9

Table 7. Emission Factors by Speed and Year

Speed	Year			Units
	2001	2010	2020	
Idle	174.34	118.91	92.57	g/hr
16 mph	17.33	12.90	10.30	g/mi
35 mph	8.05	5.82	4.61	g/mi
40 mph	6.95	4.96	3.93	g/mi

Table 8. Traffic Volumes by Scenario⁵ -- Gilbert and Guadalupe.

Scenario	Northbound			Eastbound			Southbound			Westbound			Totals
	LT	TH	RT	LT	TH	RT	LT	TH	RT	LT	TH	RT	
2001 AM-N	135	701	288	112	1278	264	146	817	57	162	316	84	4360
2001 PM-N	372	1088	218	146	478	219	163	956	127	338	1029	120	5254
2010 AM-N	144	746	313	136	1278	290	171	979	73	179	328	89	4726
2010 PM-N	416	1287	277	127	468	198	181	1161	166	369	1076	161	5886
2020 AM-N	162	835	350	140	1316	298	206	1175	88	163	298	81	5113
2020 PM-N	507	1570	338	123	454	192	188	1207	172	321	936	140	6149
2010 AM-B	144	746	313	136	1278	290	171	979	73	204	328	89	4751
2010 PM-B	416	1287	302	127	468	198	181	1161	166	369	1076	161	5911
2020 AM-B	162	835	350	140	1316	298	206	1175	88	188	298	81	5138
2020 PM-B	507	1570	364	123	454	192	188	1207	172	321	936	140	6174

⁵ Scenarios are defined by the calendar year, and morning or evening "no-build" (N) or "build" (B) traffic.

Table 9. Traffic Volumes by Scenario -- Gilbert and Page.

Scenario	Northbound			Eastbound			Southbound			Westbound			Totals
	LT	TH	RT	LT	TH	RT	LT	TH	RT	LT	TH	RT	
2001 AM-N	8	945	13	3	0	2	17	888	19	17	1	15	1928
2001 PM-N	45	1254	14	25	2	21	12	1041	35	17	2	47	2515
2010 AM-N	11	1059	22	2	2	1	22	1064	22	16	2	16	2238
2010 PM-N	41	985	10	20	2	27	17	1671	52	25	3	40	2897
2020 AM-N	14	1345	28	2	2	1	31	1490	31	15	2	15	2976
2020 PM-N	61	1458	15	19	2	26	19	1805	56	24	3	38	3528
2010 AM-B	236	1059	22	2	2	1	22	1064	47	16	2	16	2488
2010 PM-B	41	985	10	45	2	252	17	1672	52	25	3	40	3146
2020 AM-B	239	1344	28	2	2	1	31	1490	56	15	2	15	3226
2020 PM-B	61	1458	15	44	2	251	19	1805	56	24	3	38	3777

Table 10. Traffic Volumes by Scenario⁶ -- Gilbert and Elliot.

Scenario	Northbound			Eastbound			Southbound			Westbound			Totals
	LT	TH	RT	LT	TH	RT	LT	TH	RT	LT	TH	RT	
2001 AM-N	114	629	127	206	880	119	121	597	176	191	461	70	3691
2001 PM-N	227	745	158	171	501	180	84	669	193	232	927	108	4195
2010 AM-N	144	729	154	177	787	144	132	759	209	181	462	79	3957
2010 PM-N	285	925	214	177	506	160	93	722	217	215	1102	115	4730
2020 AM-N	184	933	197	184	819	150	202	1161	320	170	434	75	4828
2020 PM-N	407	1323	305	172	491	155	130	1011	303	210	1080	112	5701
2010 AM-B	144	874	154	202	788	144	132	759	209	181	462	134	4182
2010 PM-B	285	925	214	177	506	160	148	866	242	215	1102	115	4955
2020 AM-B	184	1078	197	209	819	150	202	1161	320	170	434	130	5053
2020 PM-B	407	1323	305	172	491	155	185	1156	328	210	1080	112	5926

⁶ Scenarios are defined by the calendar year, and morning or evening "no-build" (N) or "build" (B) traffic.

Table 11. Modeled Maximum One-Hour Average CO Concentrations (ppm)

Scenario	Intersection of Gilbert with:		
	Guadalupe	Page	Elliot
2001 AM-N	5.4	1.4	4.5
2001 PM-N	5.9	1.6	4.7
2010 AM-N	3.8	1.1	3.0
2010 PM-N	4.6	1.3	3.4
2020 AM-N	3.1	1.1	2.7
2020 PM-N	3.9	1.2	2.9
2010 AM-B	3.8	1.2	3.0
2010 PM-B	4.6	1.3	3.4
2020 AM-B	3.1	1.1	2.7
2020 PM-B	3.9	1.2	3.0

Table 12. Summary of Maximum Predicted Concentrations

Averaging Period	Modeled Concentration	Neighborhood Background	Predicted Maximum	NAAQS
1-hour	5.9 ppm	4.6 ppm	10.5 ppm	35 ppm
8-hour	4.1 ppm	2.7 ppm	6.8 ppm	9 ppm

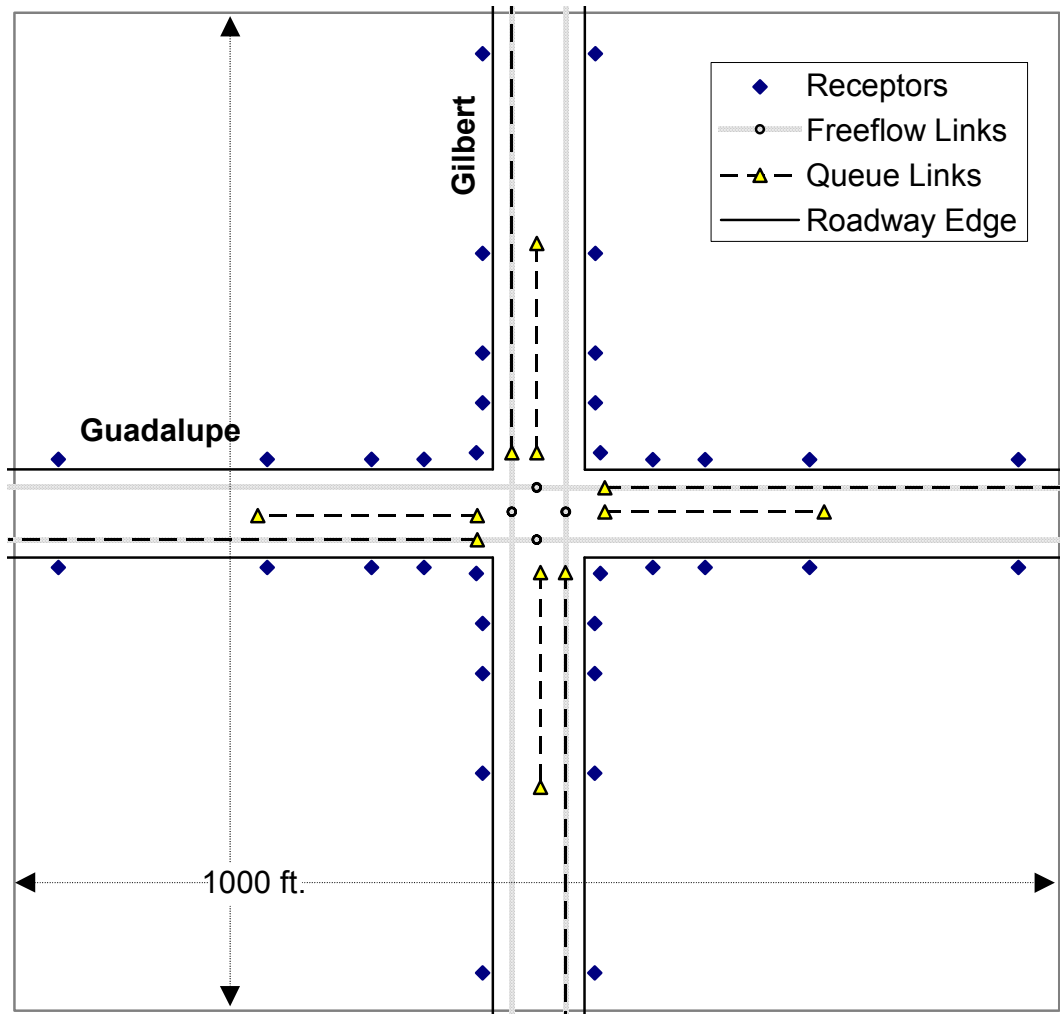


Figure 1. Link and Receptor Locations at Gilbert and Guadalupe.

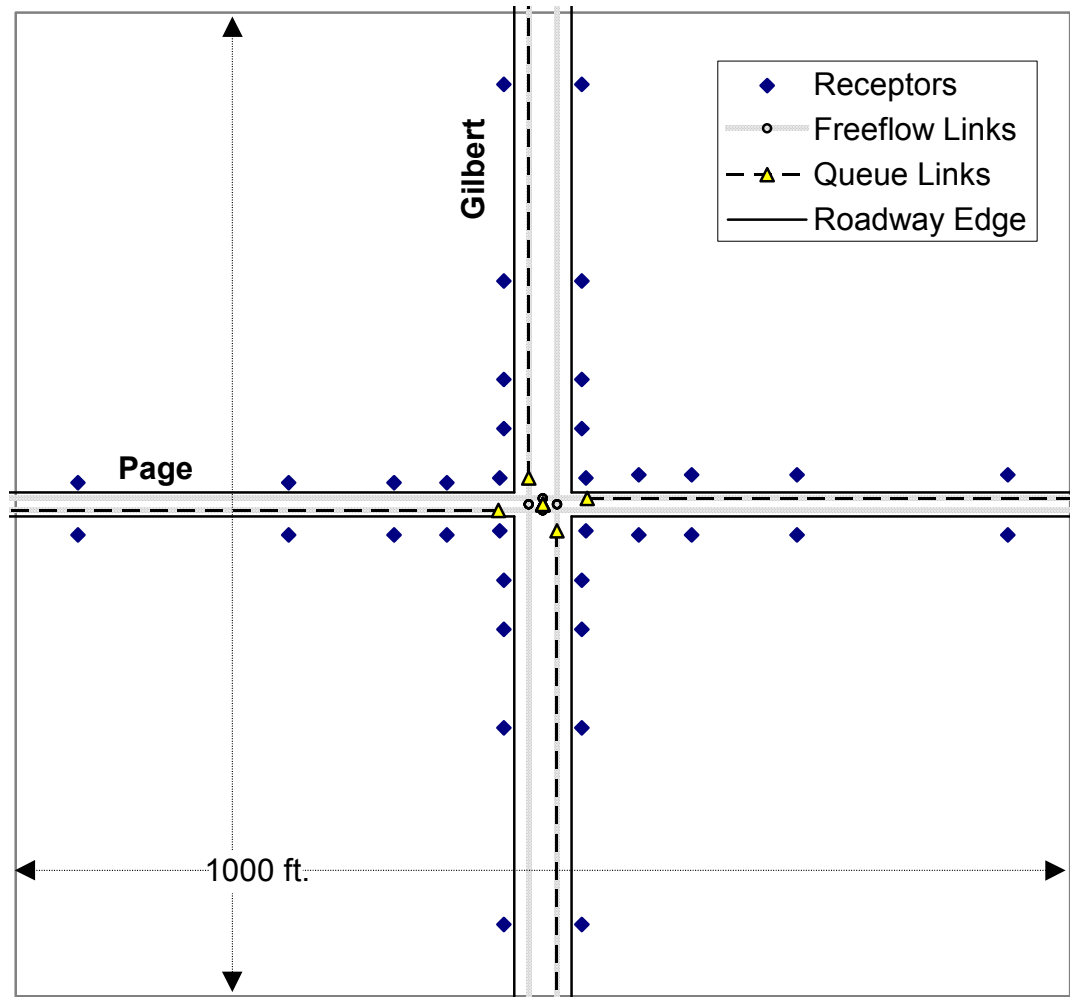


Figure 2. Link and Receptor Locations at Gilbert and Page.

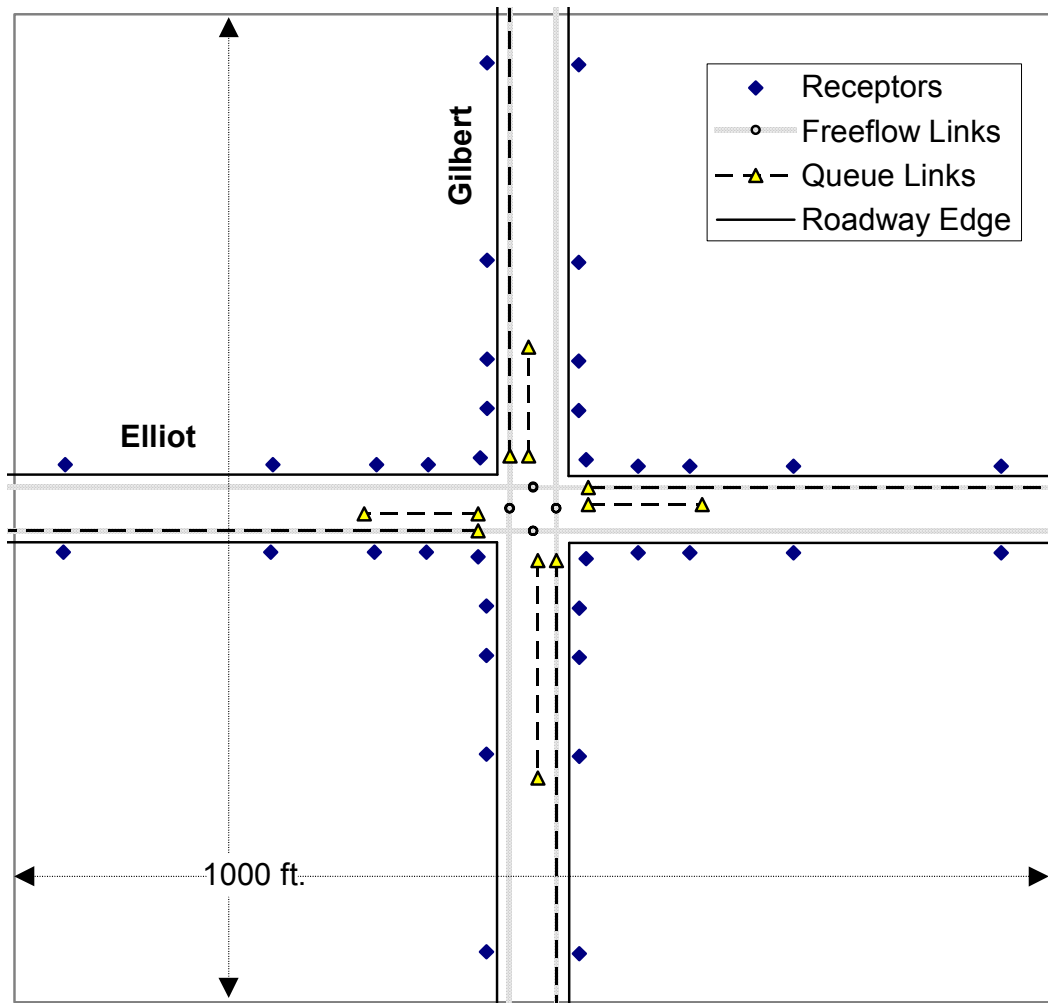


Figure 3. Link and Receptor Locations at Gilbert and Elliot.

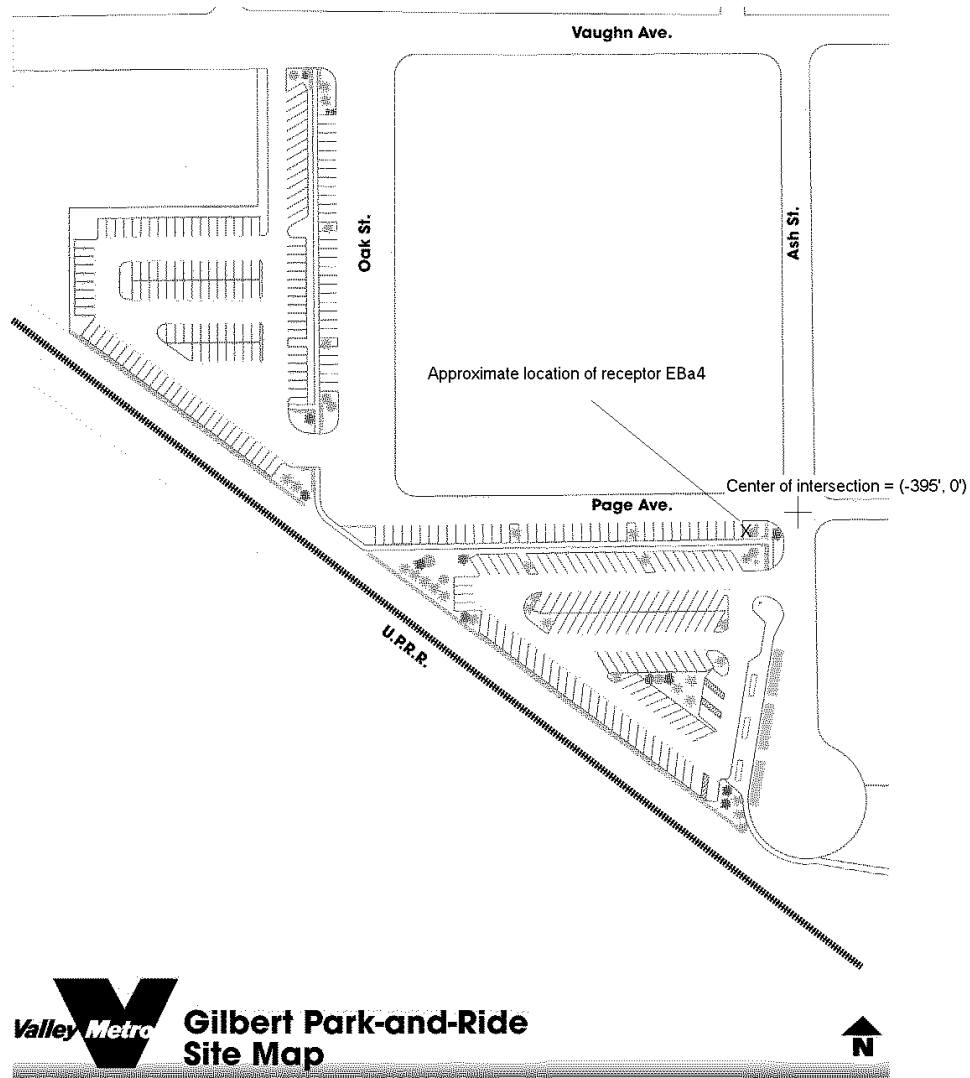


Figure 4. Location of Proposed Park & Ride Lot in Relation to Receptors

Attachment F

**Letter of concurrence for Air Quality Conformity from
Maricopa Association of Governments**



302 North 1st Avenue, Suite 300 • Phoenix, Arizona 85003
 Phone (602) 254-6300 • FAX (602) 254-6490
 Email: mag@mag.maricopa.gov • Website: www.mag.maricopa.gov

June 14, 2001

Ms. Tami Ryall
 Assistant to the Town Manager
 Town of Gilbert
 1025 South Gilbert Road
 Gilbert, Arizona 85296

Post-it® Fax Note	7671	Date	6-14-01	# of pages	2
To	MARK McLAREN		From	CHRIS VOLK	
Co./Dept.	SRB		Co.	MAG	
Phone #			Phone #	452 5026	
Fax #	602 262 2682		Fax #		

Dear Ms. Ryall:

In a letter dated May 3, 2001, you requested input from the Maricopa Association of Governments regarding a draft conformity determination for the proposed Gilbert Park-and-Ride facility. For consultation purposes, a memorandum describing the project and conformity determination were provided to transportation and air quality agencies, and other interested parties. The transmittal also advised that the conformity assessment was on the agenda for the May 9, 2001 MAG Management Committee and the May 23, 2001 MAG Regional Council meetings. Consultation was concluded on May 23, 2001 and no comments on the conformity determination were received from MAG member agencies or other interested parties.

A copy of the interagency consultation memorandum dated May 8, 2001 and notification of approval and conclusion of consultation memorandum dated June 14, 2001 are enclosed for your records. The consultation memorandum indicates that MAG has reviewed the proposed project for compliance with the federal conformity rule and concurs with the project-level conformity determination.

We hope that this information is helpful to you and the Federal Highway Administration in your environmental review process for the Gilbert Park-and-Ride facility. Please do not hesitate to contact me if I may be of further assistance in this matter.

Sincerely,

Dean Giles
 Air Quality Planner

attachments

A Voluntary Association of Local Governments in Maricopa County

City of Avondale • Town of Buckeye • Town of Carefree • Town of Cave Creek • City of Chandler • City of El Mirage • Town of Fountain Hills • Town of Gila Bend • Gila River Indian Community • Town of Gilbert
 City of Glendale • City of Goodyear • Town of Guadalupe • City of Litchfield Park • Maricopa County • City of Mesa • Town of Paradise Valley • City of Peoria • City of Phoenix • Town of Queen Creek



302 North 1st Avenue, Suite 300 ▲ Phoenix, Arizona 85003
Phone (602) 254-6300 ▲ FAX (602) 254-6490
Email: mag@mag.maricopa.gov ▲ Website: www.mag.maricopa.gov

May 8, 2001

TO: Leslie Rogers, Federal Transit Administration
Robert Hollis, Federal Highway Administration
Mary Peters, Arizona Department of Transportation
Jacqueline Schafer, Arizona Department of Environmental Quality
Ken Driggs, Regional Public Transportation Authority
Al Brown, Maricopa County Environmental Services Department
Debbie Jordan, U.S. Environmental Protection Agency, Region IX
Other interested parties

FROM: Dean Giles, Air Quality Planner

SUBJECT: CONSULTATION FOR PROJECT-LEVEL CONFORMITY DETERMINATION ON THE
PROPOSED GILBERT PARK-AND-RIDE FACILITY

In May 2001, the Town of Gilbert requested concurrence for the project-level conformity determination prepared for the Gilbert Park-and-Ride facility. The project is proposed for the southwest corner of Page Avenue and Ash Street, directly off of Gilbert Road in Gilbert on a three acre parcel. The project is identified as GLB00-003 in the FY 2001-2005 MAG Transportation Improvement Program (TIP) for fiscal year 2003. The estimated cost of this project is \$3.6 million. The consultation for the corresponding project-level conformity assessment is on the agenda for the May 9, 2001 meeting of the MAG Management Committee and the May 23, 2001 meeting of the MAG Regional Council. **Comments on the conformity assessment are due by May 18, 2001 (see Attachment).**

MAG has reviewed the proposed project for compliance with the federal conformity rule (40 CFR Parts 51 and 93) and concurs with the project-level conformity determination. The project was exempt from the regional emissions analyses according to the federal transportation conformity guidelines as a "bus terminal and transfer point". The current conformity finding of the TIP and the associated Long Range Transportation Plan Summary and 2000 Update that was made jointly by the Federal Highway Administration and Federal Transit Administration in a letter dated July 31, 2000, remains unchanged by this action. This conformity assessment is being transmitted for consultation purposes to the agencies and other interested parties listed above. If you have any questions or comments, please contact me at (602) 254-6300.

cc: Nancy Wrona, Arizona Department of Environmental Quality

A Voluntary Association of Local Governments In Maricopa County

City of Avondale ▲ Town of Buckeye ▲ Town of Carefree ▲ Town of Cave Creek ▲ City of Chandler ▲ City of El Mirage ▲ Town of Fountain Hills ▲ Town of Gila Bend ▲ Gila River Indian Community ▲ Town of Gilbert
City of Glendale ▲ City of Goodyear ▲ Town of Guadalupe ▲ City of Litchfield Park ▲ Maricopa County ▲ City of Mesa ▲ Town of Paradise Valley ▲ City of Peoria ▲ City of Phoenix ▲ Town of Queen Creek

ATTACHMENT

CONSULTATION ON PROJECT-LEVEL CONFORMITY DETERMINATION FOR PROPOSED GILBERT PARK-AND-RIDE FACILITY

In May 2001, the Town of Gilbert requested concurrence for the project-level conformity determination prepared for the Gilbert Park-and-Ride facility. The project is proposed for the southwest corner of Page Avenue and Ash Street, directly off of Gilbert Road in Gilbert on a three acre parcel. The project is identified as GLB00-003 in the FY 2001-2005 MAG Transportation Improvement Program (TIP) for fiscal year 2003. The estimated cost of this project is \$3.6 million.

MAG has reviewed the proposed project for compliance with the federal conformity rule (40 CFR Parts 51 and 93) and concurs with the project-level conformity determination. The project was exempt from the regional emissions analyses according to the federal transportation conformity guidelines as a "bus terminal and transfer point". The current conformity finding of the TIP and the associated Long Range Transportation Plan Summary and 2000 update that was made jointly by the Federal Highway Administration and Federal Transit Administration in a letter dated July 31, 2000, remains unchanged by this action. In addition, the project is not expected to create adverse emission impacts or interfere with transportation control measure (TCM) implementation.

TRANSPORTATION CONFORMITY REQUIREMENTS

The federal transportation conformity rule (40 CFR 93.104) requires a conformity determination of Federal Highway Administration (FHWA) and/or Federal Transit Administration (FTA) projects. Section 93.127 of the federal conformity rule further provides that a "highway or transit project of the type listed in Table 3" of that section "are exempt from regional emissions analysis requirements". In addition, Section 93.116 indicates that a project may not "cause or contribute to any new localized CO violations or increase the frequency or severity of any existing CO violations" in CO nonattainment or maintenance areas. A hot-spot analysis is necessary for this FTA project. Further, states and MPOs must ensure that exempt projects do not interfere with TCM implementation.

Provided below is an assessment of how the proposed federal aid assisted project would meet federal conformity requirements. This information is provided for consultation purposes as outlined in the MAG Conformity Consultation Processes document adopted by the MAG Regional Council on February 28, 1996.

CONFORMITY ASSESSMENT FOR THE PROPOSED PROJECT

The project proposed for conformity determination is addressed below. The project number from the MAG Transportation Improvement Program, sponsoring agency, and description are listed first, followed by the conformity assessment.

Existing TIP Project

1. GLB00-003, Town of Gilbert, Park-and-Ride Facility - southwest corner of Page Avenue and Ash Street. This project is exempt from regional emissions analysis under the category "bus terminals and transfer points", however it requires a project-level conformity determination. The Town of

Gilbert has prepared an air quality impact analysis, which includes a carbon monoxide hot-spot analysis for this project. The analysis concludes that the Gilbert Park-and-Ride will not cause or contribute to an exceedance of the carbon monoxide standard.

MAG has reviewed the proposed project for compliance with the federal conformity rule (40 CFR Parts 51 and 93) and concurs with the project-level conformity determination. MAG has reviewed the air quality impact analysis for completeness and concurs with the findings. The conformity status of the existing TIP and Long Range Transportation Plan Summary and 2000 Update would be unchanged by this action.



302 North 1st Avenue, Suite 300 • Phoenix, Arizona 85003
 Phone (602) 254-6300 • FAX (602) 254-6490
 Email: mag@mag.maricopa.gov • Website: www.mag.maricopa.gov

June 14, 2001

TO: Leslie Rogers, Federal Transit Administration
 Robert Hollis, Federal Highway Administration
 Jacqueline Schafer, Arizona Department of Environmental Quality
 Mary Peters, Arizona Department of Transportation
 Ken Driggs, Regional Public Transportation Authority
 Al Brown, Maricopa County Environmental Services Department
 Debbie Jordan, U.S. Environmental Protection Agency, Region IX
 Other interested parties

FROM: Dean Giles, Air Quality Planner

SUBJECT: NOTIFICATION OF CONCLUSION OF CONSULTATION FOR PROJECT-LEVEL
CONFORMITY DETERMINATION ON THE PROPOSED GILBERT
PARK-AND-RIDE FACILITY

On May 8, 2001, the Maricopa Association of Governments transmitted for consultation purposes the project-level conformity determination on the proposed Gilbert Park-and-Ride facility to the agencies listed above and other interested parties who had previously requested to be added to the MAG conformity mailing list. The transmittal also advised that the conformity assessment was on the agenda for the May 9, 2001 MAG Management Committee and the May 23, 2001 MAG Regional Council meetings. As required under Arizona Conformity Rule 18-2-1405 (K) and corresponding MAG conformity procedures, this memorandum completes the consultation process by notifying the agencies listed above and other interested parties of any comments received during the period of consultation.

The project is identified as GLB00-003 in the FY 2001-2005 MAG Transportation Improvement Program for fiscal year 2003. This project required a project-level conformity determination under the federal conformity rule (40 CFR Parts 51 and 93).

Comments on the conformity assessment were requested by May 18, 2001. Opportunities for comment were provided at the May 9, 2001 MAG Management Committee and May 23, 2001 MAG Regional Council meetings. No comments were received. Copies of the conformity assessment (i.e. the May 8, 2001 memorandum) for the project-level conformity determination may be obtained from MAG. Copies of the MAG Management Committee and Regional Council meeting agendas and approved minutes will be available on the MAG internet web site (www.mag.maricopa.gov, under "Meetings"), or they may also be requested from MAG.

If you have any questions, please call me at (602) 254-6300.

cc: Nancy Wrona, Arizona Department of Environmental Quality

A Voluntary Association of Local Governments in Maricopa County

City of Avondale • Town of Buckeye • Town of Carefree • Town of Cave Creek • City of Chandler • City of El Mirage • Town of Fountain Hills • Town of Gila Bend • Gila River Indian Community • Town of Gilbert
 City of Glendale • City of Goodyear • Town of Guadalupe • City of Litchfield Park • Maricopa County • City of Mesa • Town of Paradise Valley • City of Peoria • City of Phoenix • Town of Queen Creek
 City of Tempe • City of Tolleson • Town of Wickenburg • Town of Yuma • Arizona Department of Transportation

TOTAL P.05

Attachment G

Phase I Environmental Assessment; Environmental Site Assessments, Inc.

Attachment G includes a summary of the Phase I Environmental Assessment. A full copy of the report can be obtained by contacting the Town of Gilbert at (480) 503-6000.

PHASE I ENVIRONMENTAL SITE ASSESSMENT

GILBERT PARK - AND - RIDE

GILBERT, ARIZONA

Prepared For:

S. R. BEARD & ASSOCIATES, L.L.C.

PHOENIX, ARIZONA

[NOTE: THIS IS A SUMMARY OF THE MARCH 14, 2001 REPORT]

APRIL 15, 2002 SUMMARY



E N V I R O N M E N T A L S I T E A S S E S S M E N T S , I N C .
M E S A , A R I Z O N A 1 - 8 0 0 - 8 5 2 - 9 5 1 2



E N V I R O N M E N T A L S I T E A S S E S S M E N T S , I N C .

1938 E. Hackamore - Mesa, Arizona 85203

(480) 835- 0415 or 1- 800- 852- 9512

April 15, 2002

S. R. Beard & Associates, L.L.C.
411 North Central Avenue, Suite 2000
Phoenix, Arizona 85004
Attention: Mark McLaren, ASLA

Subject: Summary of Phase I Environmental Site Assessment Dated 3-14-01
Gilbert Park - And - Ride
Downtown Gilbert, North of railroad tracks, west of Ash and Oak Streets
Gilbert, Arizona

Good Morning:

Environmental Site Assessments, Inc. is pleased to submit this summary of the March 14, 2001 report of our Phase I environmental site assessment for the subject site.

The subject site was an irregular shaped parcel that consisted of seven properties including a warehouse, a vacant lot, two single family homes, Vets Plumbing, All Start Electric, and LeMac Equipment. The site was located north of the railroad tracks, west of Ash and Oak Streets, and south of Page and Vaughn Avenues in Gilbert, Arizona.

A significant amount of rain had fallen the day prior to our visit to the site, and the soil on the site was dark and saturated by the rainfall.

A discussion of the information we obtained is contained in the two pages of Section 9.0 of the report, and our findings and conclusions are contained in Section 10.0 of the report. Both Section 9.0 and 10.0 are found on the following pages of this summary.

Sincerely,

Environmental Site Assessments, Inc.

Jim Powell
President

/lp

FAX (480) 834-8770

9.0 DISCUSSION OF ENVIRONMENTAL ISSUES

The following environmental issues were identified during this Phase I Environmental Site Assessment.

- The property located at 109 West Page Avenue, was listed by the ADEQ as a RCRA facility, the facility was named as Statewide Environmental Services. The actual occupant of that site was Vets Plumbing. According to the owner of Vets Plumbing, Mr. Dennis Cady, the owner of Statewide Environmental Services lived in a trailer on the Vets Plumbing property and evidently used 109 West Page as the address for Statewide Environmental Services. Mr. Cady reported that Statewide Environmental Services did not use the Vets Plumbing property for any business related activities other than using the street address for mailing purposes. Mr. Cady, the owner of Vets Plumbing, was not aware that the address for his property was used by Statewide as their mailing address and stated that he would contact them immediately to change their address to one of their off-site facilities.
- Two RCRA Compliance facilities were located within one mile of the site. One of the facilities was identified as B & L Painting, at 154 West Vaughn Avenue, which was located approximately 0.10 mile north of the site. According to ADEQ records, B & L Painting had been investigated for issues associated with on-site dumping and disposal of paint and paint-related substances. Only the soil had been impacted at the B & L facility. Impacted soil had been removed from the B & L facility. B & L Painting no longer is located at their former location of 154 West Vaughn Avenue. The other identified RCRA Compliance facility within one mile of the site was identified as Unichem, located at 619 West Commerce, which was approximately 0.70 mile northwest of the site. This facility was not located on an adjacent property or in close proximity to the subject property.
- Eight LUST file facilities were located within one-half mile of the site. Six of the LUST file facilities were identified by the ADEQ as 'closed' facilities. A 'closed' facility is a property where a petroleum release has occurred, the source of the release has been identified and repaired, and remediation of impacted soil and/or groundwater has been completed. The two 'open' LUST facilities were identified as Consolidated Roofing and Supply located at 134 West Cullumber, approximately 0.15 mile south of the site, with a reported groundwater impact, and Texaco at 102 North Gilbert Road, approximately 0.25 mile southeast of the site, with reported undefined soil contamination. It is possible that groundwater at the site has been impacted by the release of petroleum product from the Consolidated Roofing and Supply or other facilities in the area of the site.

- Areas of discolored soil were observed at various areas of the site. Discolored soil was observed on portions of the site occupied by Vets Plumbing, All Start Electric, and LeMac Equipment. Although we did not observe significant areas of staining on the piles of soil commingled with construction rubble west of the warehouse building, we were unable to determine the condition of the soil in this area prior to being covered, nor were we able to determine what materials may be mixed with the imported soil. Also, the soil on the site was dark in color due to a significant amount of rain that had fallen in the area of the site the day before our site visit.
- Metal drums, storage tanks, and various containers of what appeared to be waste oil or other petroleum products were observed on the ground of All Start Electric, LeMac Equipment, and Vets Plumbing. In the majority of cases, the containers were stored on the ground, sometimes on wooden pallets, and in some areas on concrete or asphalt surfaces. Many of the containers were stored out doors with no protection from the elements. None of the containers were equipped with secondary containment systems, barrier posts or cathodic protection. In most cases, the soil adjacent to the containers was stained.
- A pile of vehicle batteries on a broken wooden pallet was observed at the area of the site occupied by LeMac Equipment. It is possible that leaking battery acid has impacted the soil adjacent to the batteries.
- Portions of the site occupied by Vets Plumbing, All Start Electric, and by LeMac Equipment were covered with large quantities and concentrations of vehicle parts, equipment, miscellaneous items and vehicles. We were unable to observe the condition of the soil in these areas. In addition, areas of the site were covered with concrete slabs or asphalt paving which were developed after on-site activities had been conducted such as vehicle repair and/or maintenance. We were unable to observe the condition of the soil in these covered areas.
- A large tank truck used to store diesel fuel was parked on the dirt along the south border of the LeMac property. The soil adjacent to the truck was stained.
- Due to the age of the buildings at the site, it is possible that asbestos-containing materials may have been utilized in their construction.

10.0 FINDINGS AND CONCLUSIONS

We have performed a Phase I Environmental Site Assessment in conformance with the scope and limitations of ASTM Practice E-1527-00 for the Gilbert Park - and - Ride property located north of the railroad tracks and west of Ash Street and Oak Street. in Gilbert, Maricopa County, Arizona. **This assessment did not reveal evidence of recognized environmental conditions in connection with the subject property, except for the following:**

Groundwater in the area of the subject site has been impacted by releases from leaking underground fuel storage tanks from off-site sources. Groundwater at the subject site may, or may not, have been impacted by these releases.

Portions of the subject site have been actively used for many years for vehicle repair and maintenance. Section 9.0 of this report should be referred to in order to understand environmental issues associated with the subject property.

Drums and tanks of waste oil and other petroleum products were observed stored at the site and have been stored at the site for many years. The drums and containers were often stored on ground, which had been impacted, by leaks and spills. The drums and containers were not equipped with secondary containment systems, barrier posts, protection from the elements, or stored on impervious surfaces.

Diesel fuel was stored at the LeMac property in a tank truck parked on the ground. The soil adjacent to the tank truck was discolored.

It is our understanding that the site is to be razed in order to facilitate future development. Large portions of the site were covered with vehicle parts, equipment, miscellaneous items, and vehicles, which covered the soil of the site and prevented observations of the conditions of the soil. As the site is cleared of these materials, these areas can be assessed and a determination made as to whether they have been environmentally impacted.

Regulations regarding asbestos exposure, disturbance, removal, and disposal should be complied with in the razing of the structures at the site. According to regulatory guidelines, the buildings at the site must be tested for the presence of asbestos prior to demolition, or assumed to be asbestos-containing, and treated accordingly.

Although we did not obtain information that indicated that underground fuel storage tanks (USTs) had been utilized at the site in the past, the site has a long site use history of businesses that could have utilized USTs. In order to confirm that no underground tanks were present at the site that may have not been reported or abandoned in place, after the site is cleared of buildings and other objects, a magnetometer survey of the site could be conducted.

Attachment H

**Letter from Town of Gilbert Assistant Manager regarding
residential/commercial displacements**

March 21, 2001

Ken Driggs
Executive Director
Regional Public Transit Authority
302 N First Avenue, Suite 700
Phoenix, AZ 85003

Dear Mr. Driggs:

This will confirm that Gilbert sponsored a meeting with all owners of record in the Park and Ride Lot acquisition area on October 2, 2000 at 202 N Gilbert Road, the Chamber of Commerce Community Meeting Room. The purpose of the meeting was to let those owners know of the Town's intent to acquire their property and relocate them in accordance with federal guidelines. The owners were invited by letter dated September 22, 2000

Gilbert's relocation consultant, Jay Christopher, was specifically invited to discuss questions and concerns regarding acquisition and relocation. The appraiser, Marc Barlow was present to respond to questions about timing and valuation approach.

It was my impression at the close of the meeting that the owners were anxious to move forward and purchase replacement property to minimize business disruption.

Additionally, I contacted Mark Schulte of the Union Pacific Railroad on October 17, 2000 and talked with him regarding the Town's interest in acquiring a portion of the siding property on the north side of their through line right of way. He indicated that there was a leasehold interest with Norwood Furniture, but that he needed additional information on the area to make a final determination. He indicated they were willing to negotiate with the Town on the area.

I trust this information meets your requirements. If you have additional questions, please contact me at 480-503-6864, or Tami Ryall at 480-503-6765.

Sincerely,

George A. Pettit
Assistant Manager

Cc: Mark McLaren (e-mail only)

Attachment I

A Cultural Resources Survey of the Proposed Gilbert Park-and-Ride Lot

SHPO STANDARDIZED REPORT ABSTRACT

AGENCY: Town of Gilbert

PROJECT TITLE: Gilbert Park and Ride

DATE OF REPORT: March 22, 2001

ACS PROJECT NUMBER: 01-16

AGENCY PROJECT NUMBER:

PROJECT DESCRIPTION: Class III survey of proposed park and ride lot

LOCATION: Township 1 South, Range 5 East, Section 12
Plotted on the USGS 7.5' Chandler topographic quadrangle
Gilbert, Maricopa County, Arizona

NUMBER OF SURVEYED ACRES: ~ 0.5 of 3-acre project area

METHODOLOGY: Parallel transects spaced 5 m apart

NUMBER OF SITES: 0

ELIGIBLE SITES: NA

POTENTIALLY ELIGIBLE SITES: NA

NOT ELIGIBLE SITES: NA

COMMENTS: Based on the results of the survey and archival research, no historic properties should be affected by this undertaking. If during any phase of the project cultural resources are discovered, work in the vicinity must stop and John Madsen of ASM must be notified immediately at 520-621-2096. Should human remains be encountered, all work must stop and Lynn Teague of ASM should be contacted at 520-621-4795 pursuant to state law.

A CULTURAL RESOURCES SURVEY OF THE PROPOSED GILBERT PARK-AND-RIDE LOT, GILBERT, MARICOPA COUNTY, ARIZONA

Prepared by Karolyn J. Jackman
Archaeological Consulting Services, Ltd.
ACS Project No. 01-16
March 22, 2001

The Town of Gilbert will construct a parking area designed to facilitate commuter parking. Under contract to S.R. Beard and Associates, Archaeological Consulting Services, Ltd. (ACS) conducted a Class III cultural resources survey to provide an inventory and assessment of cultural resources that might be impacted by the proposed improvements. The project area included 3.0 acres of privately owned land. The survey was done on March 9, 2001, by Karolyn J. Jackman working under permit # 2001-13bl issued by the Arizona State Museum (ASM). The land completely impacted by modern activities.

Project Area

The survey area was situated on the north side of the Southern Pacific Railroad tracks in central Gilbert (Figure 1). It was in Section 12 of Township 1 South, Range 6 East (Gila and Salt River Baseline and Meridian). The irregularly shaped parcel encompassed approximately 3.0 acres; two residences and two large businesses were within the parcel boundaries. The All Start Electric auto electric company and the residences occupy the southeastern portion of the project area, while the Lemac Company, a heavy equipment business was located on the northwestern part. Both businesses have large warehouses and extensive areas used for equipment and vehicle storage. Other areas were gravel-covered roads. In only two areas was the ground surface available for visual survey. One was covered by structural debris, tall weeds, and grasses; the other had been recently bladed after the demolition of a residential structure (Figure 2).

Previous Research

Prior to fieldwork, site and project files at ASM and the State Historic Preservation Office (SHPO) were checked to determine whether any previously recorded cultural resources were within 1.0 mi of the project area. General Land Office (GLO) records were also consulted to identify any historic activities recorded there. Only two roads were recorded on the 1876 GLO map. No sites or projects were recorded within the project area; however, nine surveys have been completed within 1.0 mi, and one previously recorded site was documented nearby.

In 1990, Salt River Project (SRP) gave clearance for a water pipeline to be placed within the Western Canal Lateral right-of-way. The work was monitored, and no sites were identified (Brunson 1990). In 1995, SWCA, Inc. Environmental Consultants surveyed land along Warner Road between Greenfield and Gilbert Roads. No sites were documented (Stubing 1995). ACS has performed four nearby surveys and found no cultural resources (Punzmann 1993, 1994; DeMaagd 1993; Troncone 1993). Archaeological Research Services, Inc., surveyed a parcel along Cooper Road and recorded one site. According to the ASM site form, AZ U:9:129(ASM) was a 1950s cement and brick foundation with a light historic artifact scatter. Three Arizona State University (ASU) surveys have been completed in the vicinity: a survey for a proposed canal realignment for the Roosevelt Water Conservation District (Blank 1977), a survey of the SRP Broadway to Kyrene Transmission Line (AZSite database files), and a survey for the Gilbert Sewage Treatment Plant (Larson 1980). No nearby cultural resources were identified by any of these projects.

Also reviewed were the 1923 and 1931 update of the Sanborn Insurance maps on file at the Arizona State Archives. The maps for Gilbert include the area directly south of the project area. These maps depicted a railroad depot outside the project area.

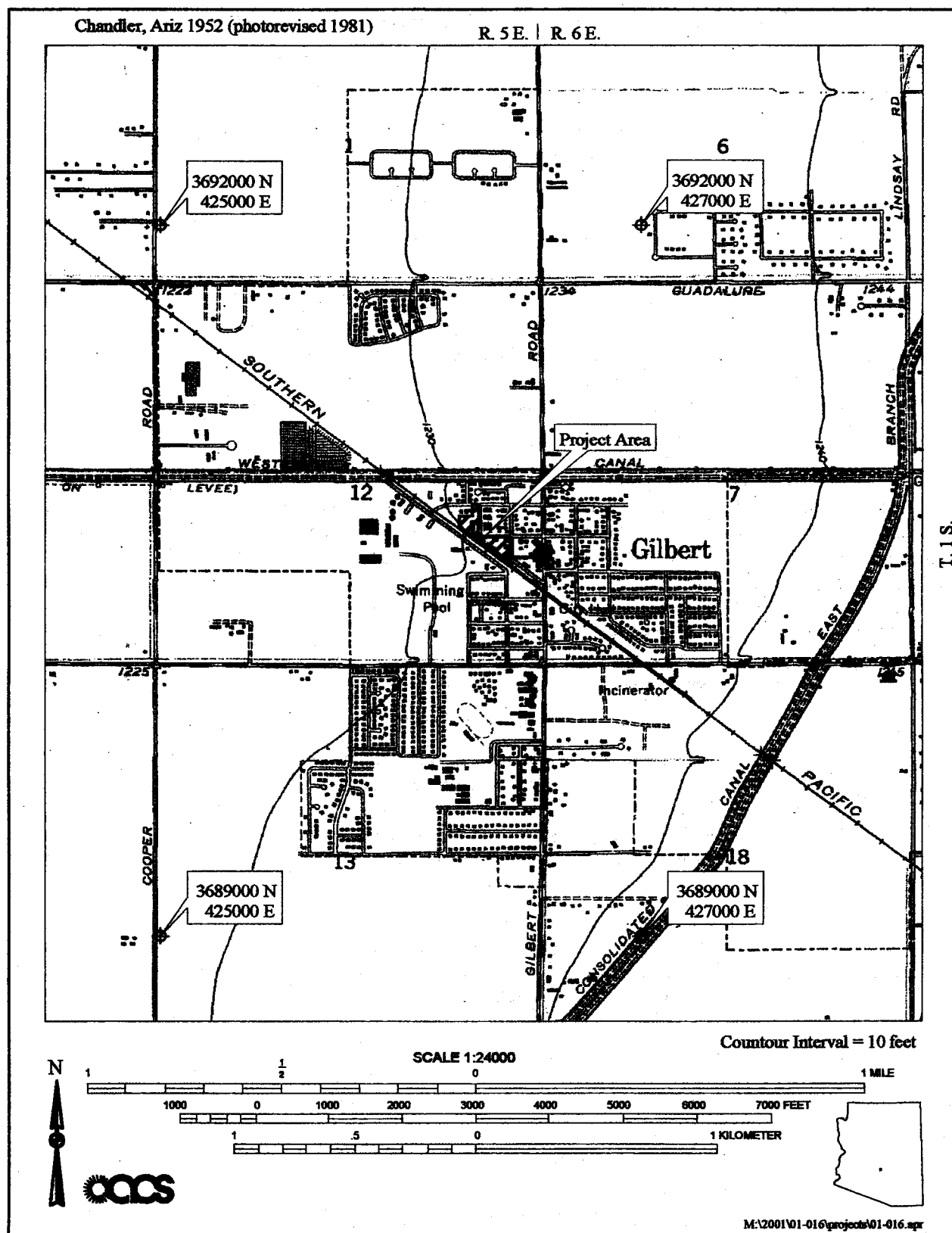


Figure 1. Portions of the USGS 7.5' Chandler topographic quadrangles showing the location of the project area.

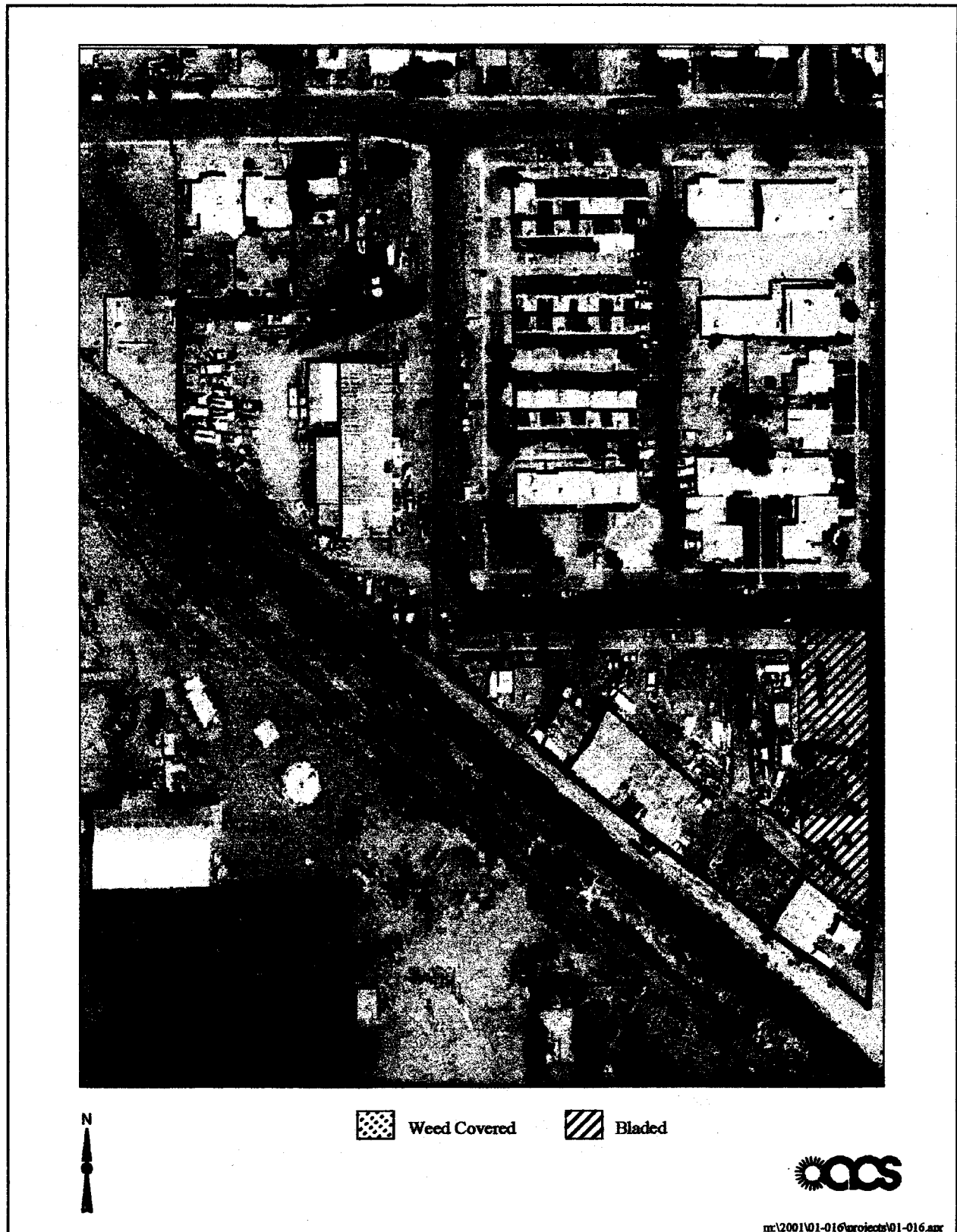


Figure 2. Aerial photograph showing the developed, bladed, and the weed-covered areas.

Field Methods and Results

Fieldwork was completed on March 9, 2001, by Carolyn J. Jackman. Only the bladed area (about 0.5 acres) was systematically examined via parallel pedestrian transects spaced 5 m apart. The ground surface was closely examined for isolated artifacts, artifact scatters, trash dumps, rock alignments, ash, stained soil, or other indications of cultural activity. A light scatter of modern trash and structural debris, probably from the recently demolished structure shown on the aerial photograph, was observed. No historic or prehistoric cultural resources were identified.

In addition to the field inspection, a few aerial photographs and historic maps at the Gilbert Historical Society were inspected. No historic buildings or other potential features were found in the project area in these resources. Nor did the museum staff member remember any historic use in the area.

Summary and Recommendations

Based on the results of the survey and archival research, no historic properties should be affected by this undertaking. If during any phase of the project cultural resources are discovered, work in the vicinity must stop and John Madsen of ASM must be notified immediately at 520-621-2096. Should human remains be encountered, all work must stop and Lynn Teague of ASM should be contacted at 520-621-4795 pursuant to state law.

References

Blank, Lori B.

- 1977 *An Archaeological Clearance Survey of the Proposed Relining of Existing Canals, Roosevelt Water Conservation District, Arizona*. Office of Cultural Resource Management Report No. 77-145. Arizona State University, Tempe.

Brunson, Judy

- 1990 Letter to Thomas Lincoln, US Bureau of Reclamation, Phoenix. Ms. on file, Salt River Project, Phoenix.

DeMaagd, Holly S.

- 1993 Preliminary Archaeological Survey of a 60 Acre Parcel at Cooper Road and Houston Avenue, Gilbert, Maricopa County, Arizona. Ms. on file, Archaeological Consulting Services, Ltd., Tempe.

Larson, Bruce

- 1980 *An Archaeological Clearance Report for a Sewage Treatment Plant Near Gilbert, Arizona*. Office of Cultural Resource Management Report No. 80-257. Arizona State University, Tempe.

Punzmann, Walter

- 1993 A Cultural Resource Assessment of the Proposed Centex Reserved School Site, Gilbert, Maricopa County, Arizona. Ms. on file, Archaeological Consulting Services, Ltd., Tempe.
- 1993 An Archaeological Survey of the Proposed Gilbert School Site near McQueen and Elliot Roads, Gilbert, Maricopa County, Arizona. Ms. on file at Archaeological Consulting Services, Ltd., Tempe.

Stubing, Michael and Douglas Mitchell

- 1995 An Archaeological Survey Along Warner Road, Between Gilbert Road and Greenfield Road, Maricopa County, Arizona. SWCA Archaeological Report #95-23. Ms. on file, SWCA Inc. Environmental Consultants, Phoenix.

Troncone, Steve

- 1993 Cultural Resource Survey for a Proposed School Site Near McQueen Road and the Western Canal, Gilbert, Maricopa County. Ms. on file, Archaeological Consulting Services, Ltd., Tempe.

Attachment J

Letter of concurrence from State Historic Preservation Office



U.S. DEPARTMENT OF TRANSPORTATION
FEDERAL HIGHWAY ADMINISTRATION

ARIZONA DIVISION
234 N. Central Avenue, Suite 330
Phoenix, AZ, 85004

April 5, 2001

APR 12 2001

4/13/01

S.H.P.O. 2001 -10/8 (6013)

IN REPLY REFER TO

HA-AZ

CM-900-0 (208)

TRACS# 000 MA 999 H5466 01X

Gilbert Park and Ride Lot

Section 106 Consultation, "no historic properties affected"

Jo Anne Miller, Compliance Specialist
State Historic Preservation Office
Arizona State Parks
1300 West Washington
Phoenix, AZ 85007

Dear Ms. Miller:

The Arizona Department of Transportation (ADOT) and the Federal Highway Administration (FHWA) are working with the Town of Gilbert to construct a park-and-ride lot that will benefit both commuters and local businesses in Maricopa County. Because this project may qualify for Federal-aid funding it is considered an undertaking subject to Section 106 review. The project would provide about 250 parking spaces, up to half that may be covered, and a drop-off area in close proximity to the bus bays. The area of potential effect (APE) is an irregularly-shaped area that includes seven properties comprised of a warehouse, a vacant lot (owned by the Town of Gilbert), two single-family residences, Vets Plumbing, All Start Electric, and LeMac Equipment. The entire site would be razed, cleared of debris, and graded to accommodate the new facility. Land within the APE is owned either by the Town of Gilbert or private individuals. Consulting parties for this project are ADOT, FHWA, the Town of Gilbert, and the Arizona State Historic Preservation Officer. Since this project is located in central Gilbert, which is extensively developed, FHWA does not consider Native American consultation necessary.

As part of the planning for this project a cultural resources inventory survey of the APE was conducted by Archaeological Consulting Services, Ltd. (ACS). ACS presents the results in "*A Cultural Resources Survey of the Proposed Gilbert Park-and-Ride Lot, Gilbert, Maricopa County, Arizona.*" No significant historic properties were identified as a result of the ACS inventory survey.

Please consider the information presented in this letter and the attached report. Since ACS did not identify any historic properties in their survey of the APE, a finding of "no historic properties

affected" is appropriate. If you agree with the findings in this letter (the definition of the APE, identification of consulting parties, adequacy of the survey, and "no historic properties affected") please indicate your concurrence by signing below. If you have questions or comments, please contact Dr. Owen Lindauer at (602) 712-6819.

Sincerely,

for Robert E. Hollis
Division Administrator

Signature for SHPO Concurrence

Date

Enclosure

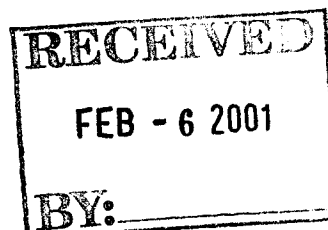
SDThomas:sg

cc: Owen Lindauer, ADOT

Attachment K

Letter from Arizona Department of Environmental Quality

Maricopa County Rules 310 and 310.01, referenced in the letter from the Arizona Department of Environmental Quality (Attachment K), can be obtained by contacting the Town of Gilbert at (480) 503-6000.

**ARIZONA DEPARTMENT OF ENVIRONMENTAL QUALITY**

Governor Jane Dee Hull

Jacqueline E. Schafer, Director

January 30, 2001

Mr. Mark McLaren, ASLA
Regional Public Transportation Authority
Bus Facilities Consultant
302 N. First Avenue, Suite 700
Phoenix, AZ 85003

SUBJECT: Regional Park-and-Ride Facility Site in Gilbert

Dear Mr. McLaren:

Thank you for your January 4, 2001, letter to Nancy Wrona, Air Quality Director, requesting a review of the regional park-and-ride facility project in Gilbert.

The proposed project is located in the Maricopa County Carbon Monoxide, Ozone and PM_{10} Nonattainment Areas, as designated by EPA pursuant the Clean Air Act. The latest PM_{10} State Implementation Plan (SIP), submitted to EPA in February 2000, included requirements for specific control measures to be implemented by local (including the City of Gilbert), state and federal entities. The specific control measures that may apply when the construction phase of the project begins during the winter of 2002 are Maricopa County Rules 310 and 310.01 (see Enclosures).

Although the proposed project is not expected to cause any violations of the PM_{10} national ambient air quality standards, care should be taken to minimize ambient particulate matter (dust) levels. The following steps may minimize the amount of particulate matter generated, including incidental emissions caused by strong winds, as well as tracking dirt off the construction site by machinery and trucks.


- I. Site Preparation
 - A. Minimize land disturbance and
 - B. Use windbreaks to prevent any accidental dust pollution.
- II. Site Restoration
 - A. Remove unused material and
 - B. Remove dirt piles.

Portable sources such as rock, sand, gravel, and asphalt concrete plants are required to receive permits from the Maricopa County Department of Environmental Services. For further information regarding permitting, Maricopa County's rule and requirements, please contact Jo Crumbaker at (602) 506-6705.

According to your telephone conversation with Andra Juniel of my staff on Tuesday, January 30, 2001, we confirmed that this project is included in the MAG Conformity Analysis FY 2001-2005 MAG Transportation Improvement Program. Consequently, the project must meet the requirements of Article 14 of the Arizona Administrative Code.

Should you have any further questions, please contact me at (602) 207-2375, or Andra Juniel of my staff at (602) 207-4417.

Sincerely,

A handwritten signature in cursive script, appearing to read "Theresa Pella".

Theresa Pella, Manager
Planning Section

Enclosures

cc: Jo Crumbaker, MCBAPC

Attachment L

Letter of support from Town of Gilbert Planning Department



*Town of Gilbert, Arizona
A Community of Excellence
Community Development
1025 South Gilbert Road
Gilbert, Arizona 85296*

January 29, 2001

Mark McLaren, ASLA
Regional Public Transportation Authority
Bus Facilities Consultant
302 N. First Avenue, Suite 700
Phoenix, AZ 85003

Re: Town of Gilbert Park-and-Ride
Federal Aid Number CM-900-0 (208)
TRACS Number: H5466 01X

Dear Mr. McLaren:

The Park-and-Ride preferred location at the southwest corner of Page Avenue and Ash Street is supported by Gilbert's Planning Department. As your letter states, this site located within the Heritage District would complement the goals for this area to become a pedestrian oriented destination. Your analysis regarding opportunities for joint use, redevelopment and improved lighting and streetscape design also supports the adopted Redevelopment Plan for this area.

Issues related to the social, environmental, and economic impacts to the proposed Park-and-Ride are opportunities for positive changes.

Thank you for the opportunity to express our concerns related to this Categorical Exclusion. If you have any questions, please contact me at lindae@ci.gilbert.az.us or 480.503.6750.

Sincerely,

Linda M. Edwards, AICP
Planning Manager

Cc: Tami Ryall, Government Relations Coordinator